Annual Statistics

2011-2012

MANITOBA HEALTH
Health Information Management

Manitoba

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Preface

Manitoba Health's *Annual Statistics* report is designed for a broad audience that includes health professionals, researchers, policymakers and the general public. This report describes Manitoba's population, health utilization and health status using key health indicators measured both over time and for the most recently available fiscal or calendar year.

In April of 2012, a merger process was initiated to reduce the number of regional health authorities (RHAs) in Manitoba from 11 to 5. After consultation within Manitoba Health and with the RHAs, it was decided to present each indicator in this year's report by both the new and former RHA geographies. Presenting the health information in this way allows users to compare the results of this report with those in previous reports using the former RHAs, and with those in future reports using the new RHAs.

Any inquiries pertaining to this publication generally or in reference to specific indicators should be addressed to:

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How to Use This Report

The Manitoba Health *Annual Statistics* report is a descriptive report comprised of thirteen sections. The report looks at the distribution of the population, mortality, disease and injury, prevalence of mental illness, physician and hospital services, use of home care and personal care homes, preventative services and prescription drug use. Unless otherwise stated, indicators in this report are population-based rather than service-based. In other words, the indicators reflect where people live, not where they received services.

For most indicators the report provides a rate by RHA and then a more in-depth look or **"Highlight"** at the Manitoba level. For some indicators, the data is only presented at the Manitoba level. The majority of the indicators report data for the 2011/2012 fiscal year. Where most recent data was not available, the prior year was used. However, in some instances due to small numbers, multiple years had to be combined to ensure confidentiality and to achieve stable rates. For more information on how the indicators were calculated and defined please refer to the glossary.

Indicators found in this report show similar trends to indicators found in other public documents. However, exact rates in this report cannot be directly compared due to different inclusion and exclusion criteria.

The report provides descriptive analyses of indicators, not explanatory. Indicators are produced using administrative data, which does not include information on context, history or local circumstances. The information in this report should be used in conjunction with information from other sources so that regional and provincial planners and decision-makers can make well-informed decisions.

Important Notes and Data Cautions

Throughout the report, the new and former RHAs are shown in a particular order based on their overall health status as measured by the premature mortality rate (PMR). PMR was calculated for the new and former RHAs by the Manitoba Centre for Health Policy for the RHA Indicators Atlas 2009[1] and 2013, respectively. A death before the age of 75 is considered to be premature; therefore the PMR is the average annual rate of deaths before the age of 75, per 1,000 residents under 75. The RHA with the lowest PMR (best overall health status) appears at the top of the graph. The RHA with the highest PMR (poorest overall health status) appears at the bottom of the graph.

Two types of rates are presented in this report: crude rates and adjusted rates.

Crude rates:

- A crude rate is the expression of the frequency of an event in a defined population in a defined period of time. It is calculated by dividing the number of observations by the suitable population and multiplying by an appropriate multiplier (such as 100 to create a percentage). Although crude rates do not take differences in population structure into account they are vital for policy and programming as they represent the actual rate in a given population.

Adjusted Rates:

- The adjustment of rates is a statistical process that makes groups such as those in particular geographic areas comparable by removing the effects of demographic differences such as age and gender distribution. Essentially, adjusted rates tell us what the rates would be if each geographic area had the same age and sex distribution. Therefore, adjusted rates are fictional rates which use statistical models to remove the effects of age and sex differences to allow for comparisons across populations.

  Accordingly, while adjusted rates have been statistically modelled to be comparable to each other, they should be considered fictional in the sense that they do not measure anything directly. Please note that these adjusted rates cannot be compared to other rates which have not received the same adjustment.

Statistical Testing:

Statistical testing was performed to determine whether regional rates were statistically significantly different from the Manitoba rate for each time period. If a difference was statistically different, then we are 99% confident that this difference is not just due to chance.

Please note the following data cautions when reading the graphs:

(*) Indicates that the region is statistically different from Manitoba.
(!) Indicates that the regional rate should be used with caution due to small numbers.
(-) Indicates that the regional rate is suppressed because the numerator contains a small number of individuals which could potentially be identified.
(..) Indicates that there was no data for this time period.

1. Fransoo R, Martens P, Burland E, The Need to Know Team, Prior H, Burchill C. Manitoba RHA Indicators Atlas 2009. Winnipeg, MB: Manitoba Centre for Health Policy, September 2009.

Additional Publications to Consider

While this report has attempted to provide an overview of statistics from across the health care system, it is by no means exhaustive.

For more detailed information on cancer incidence and mortality, please refer to the following link from CancerCare Manitoba – http://www.cancercare.mb.ca/home/cancer_research/epidemiology_and_cancer_registry/reports

The regional health authorities also provide statistics in the comprehensive Community Health Assessments which are conducted every five years. The reports for each of the former RHAs can be found at:

Assiniboine – http://www.assiniboine-rha.ca/images/uploads/ARHA_CHA_Final.pdf

Brandon – http://www.brandonrha.mb.ca/export/sites/brandonrha/galleries/pdf/news/CHA_2009.pdf

Burntwood – http://www.brha.mb.ca/community_assessment_report2009.htm

Central – http://www.rha-central.mb.ca/cha.php

Churchill – http://www.churchillrha.com/pdfs/comhel09.pdf

Interlake – http://www.irha.mb.ca/data/1/rec_docs/7499_CHA_2010_IRHA_Comprehensive_Report.pdf

NOR-MAN – http://www.norman-rha.mb.ca/documents/2009-2010NRHACHAReport-ElectronicVersion.pdf

North Eastman – http://www.neha.mb.ca/2009chareport.pdf

Parkland – http://www.prha.mb.ca/Publications/PRHA%20CHA%202009_FINAL%20pdf.pdf

South Eastman – http://www.sehealth.mb.ca/data//1/rec_docs/2876_South_Eastman_Comprehensive_CHA_2008-09.pdf

Winnipeg – http://www.wrha.mb.ca/research/cha2009/index.php

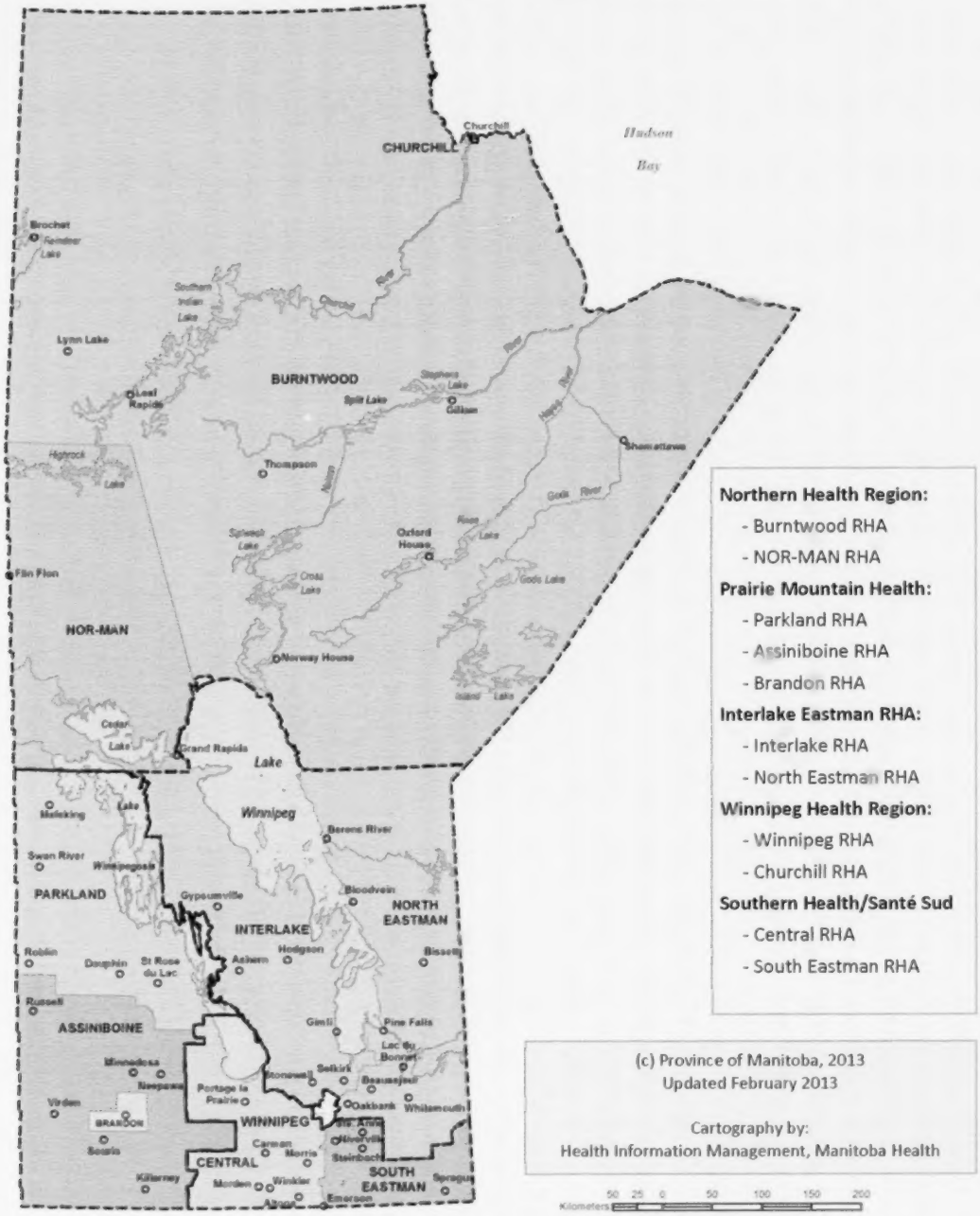
Demographics

The following section provides an overview of the demographics of the population of Manitoba. This includes population distribution and size, pregnancies, births and deaths.

In 2011/2012, Manitoba had a population of 1,250,484 residents. There were a total of 19,331 pregnancies in the same year.

There were 15,589 babies born in 2010/2011. In the same time period, 10,210 Manitobans died, with the majority of these deaths being due to circulatory disease and cancer.

Map of New and Former Manitoba Regional Health Authorities



Northern Health Region:
- Burntwood RHA
- NOR-MAN RHA

Prairie Mountain Health:
- Parkland RHA
- Assiniboine RHA
- Brandon RHA

Interlake Eastman RHA:
- Interlake RHA
- North Eastman RHA

Winnipeg Health Region:
- Winnipeg RHA
- Churchill RHA

Southern Health/Santé Sud
- Central RHA
- South Eastman RHA

(c) Province of Manitoba, 2013
Updated February 2013

Cartography by:
Health Information Management, Manitoba Health

Population Pyramids

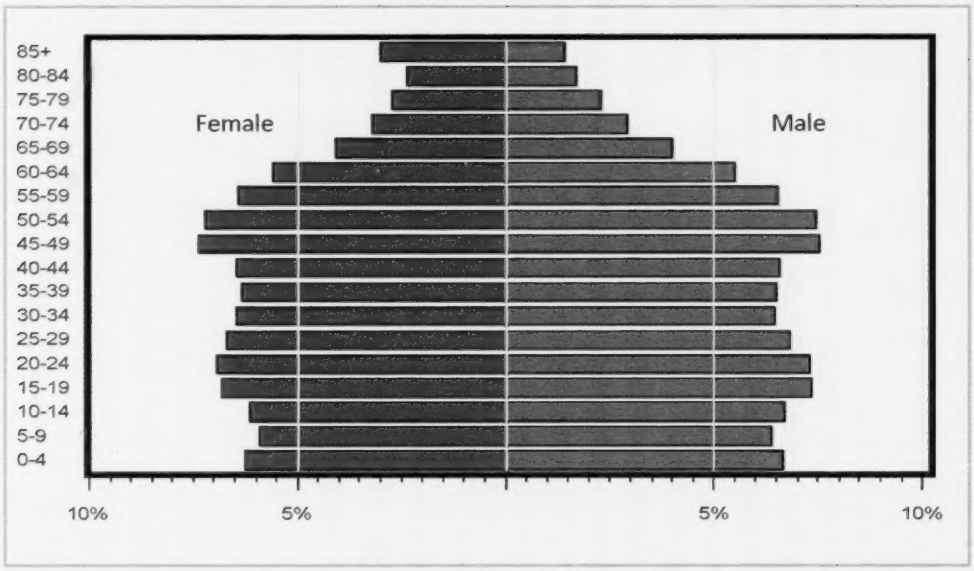


Figure 1: Population pyramid for Manitoba, 2011/2012

Figure 1 shows the age and sex composition of the Manitoba population, based on records of residents registered with Manitoba Health on June 1, 2011. The percentage of the population within each particular age group is shown for males and females.

In 2011/2012, the total population of Manitoba was 1,250,484 residents, of which 49% were male and 51% were female. In the population pyramid above two distinct bulges can be seen. One represents those in their mid forties and early fifties, and the second represents those in their late teens and early twenties.

Figure 2 shows the age and sex composition of Manitoba First Nations people based on records of self-reported First Nations residents registered with Manitoba Health on June 1, 2011. First Nations people in Manitoba are a much younger population. Of the 91,323 people who declared their First Nations status to Manitoba Health, 56% were under the age of 25, compared to only 33% for the Manitoba population overall. For more information on Manitoba's population, please refer to the Manitoba Health Population Report at http://www.gov.mb.ca/health/population/index.html.

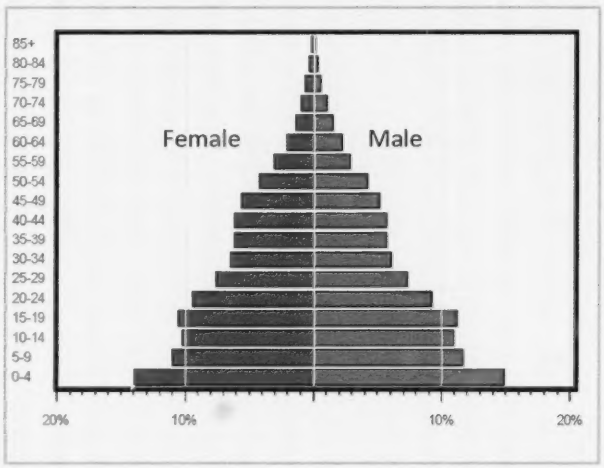


Figure 2: Population pyramid for Manitoba First Nations people, 2011/2012

Pregnancy

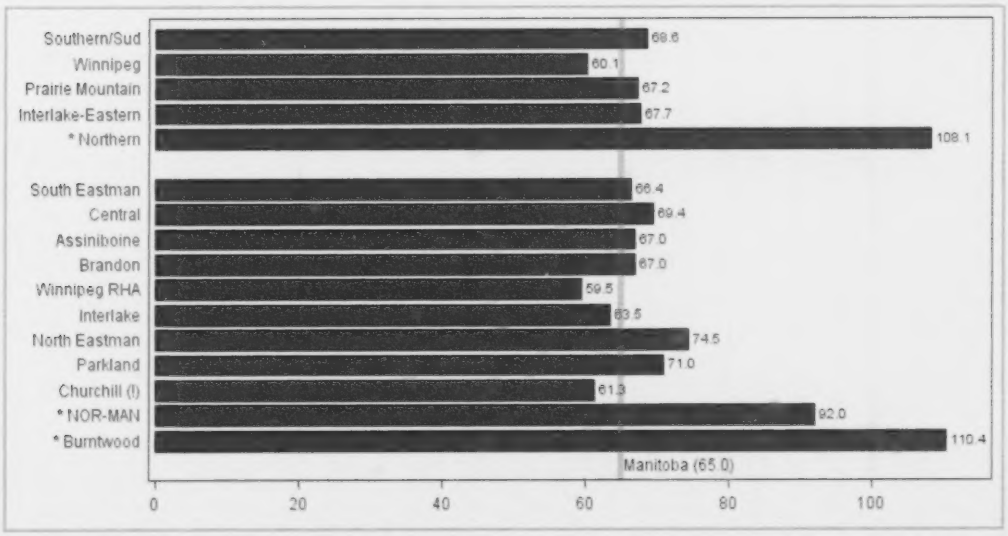
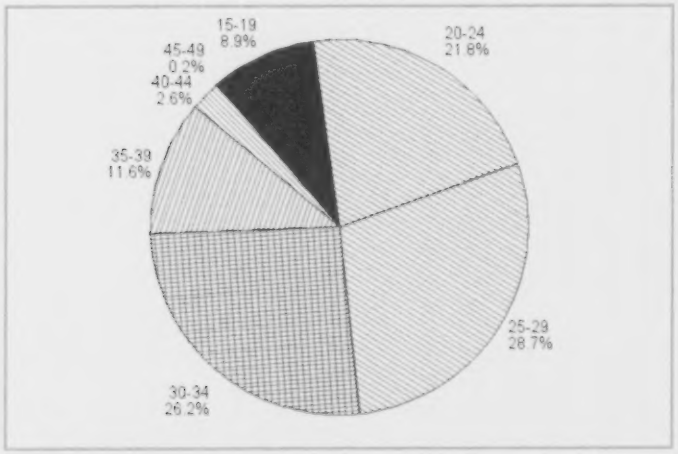


Figure 3: Age-adjusted rate of pregnancies per 1,000 female residents ages 15 to 49 by RHA, 2011/2012

Figure 3 shows the age-adjusted rate of pregnancies for Manitoba women ages 15 to 49 by RHA of residence. Pregnancies include all live births, stillbirths, abortions and ectopic pregnancies.

In 2011/2012, there were a total of 19,331 pregnancies among Manitoba women ages 15 to 49, representing a rate of 65.0 pregnancies per 1,000 women in the same age group.

Northern Health Region had a significantly higher age-adjusted pregnancy rate with a rate almost 70% higher than for Manitoba overall.



The majority of pregnancies in Manitoba were among women ages 20 to 34, with 76.7% of pregnancies represented by women in this age group (Figure 4).

Figure 4: Percentage of total pregnancies by age group, 2011/2012

Births

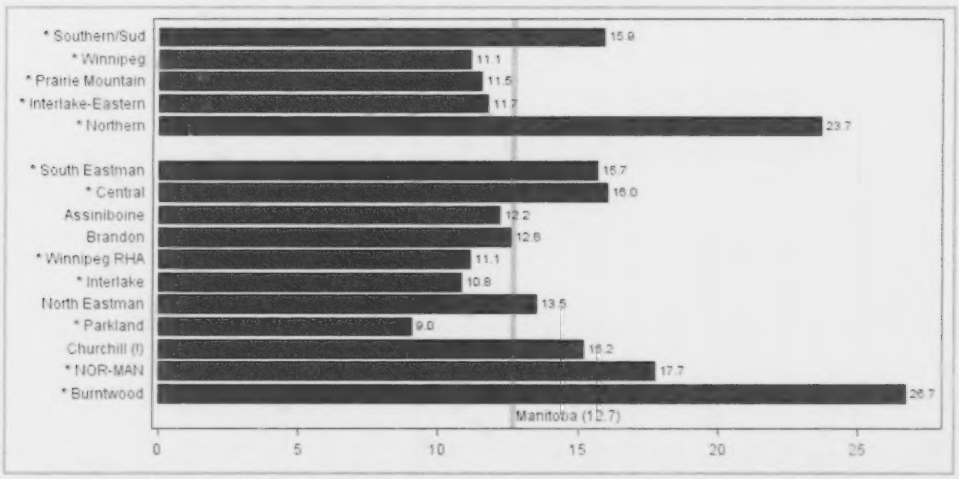


Figure 5: Crude rate of total births per 1,000 residents by RHA of residence, 2010/2011

Figure 5 shows the crude number of live births by RHA of residence, per 1,000 population.

In 2010/2011, there were 15,589 babies born to Manitoba residents, representing a rate of 12.7 newborns per 1,000 population. Rates varied significantly across the province, ranging from a high of 23.7 births per 1,000 population in Northern Health Region to a low of 11.1 births per 1,000 population in Winnipeg Health Region.

The majority of babies born in Manitoba had a weight that was appropriate-for-gestational-age with 79% of newborns within this group (Figure 6). Of the remaining newborns, 13% were large-for-gestational-age and 9% were small-for-gestational-age.

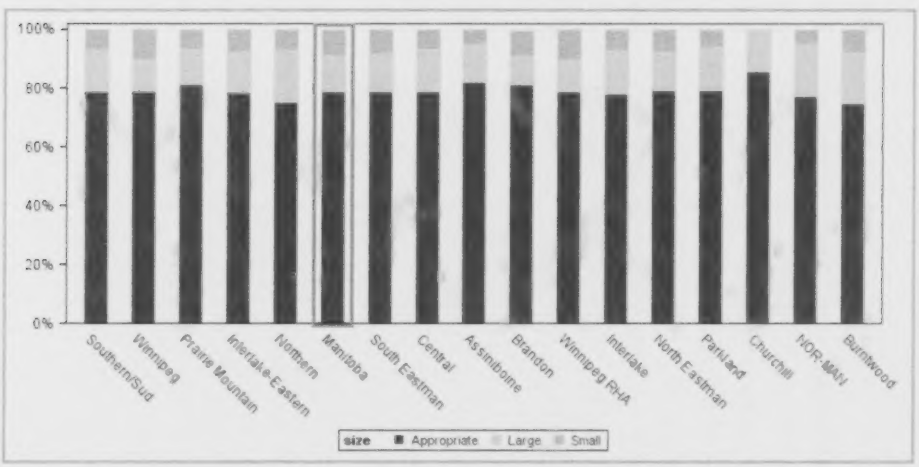


Figure 6: Percentage of total live births by size for gestational age, 2010/2011

Deaths

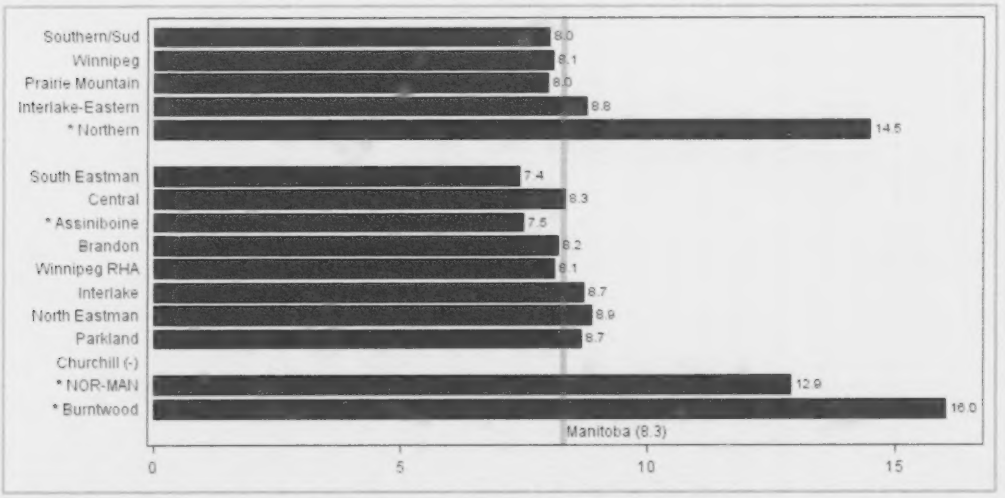
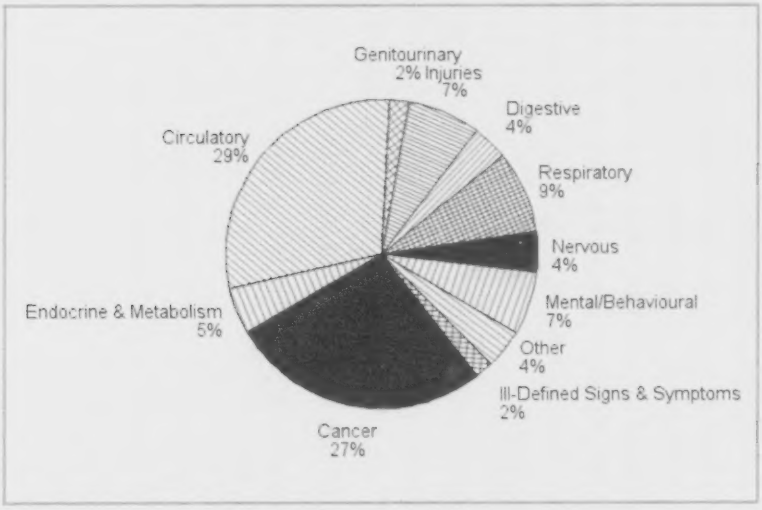


Figure 7: Age- and sex-adjusted rate of death per 1,000 residents by RHA, 2010/2011

Figure 7 shows the age- and sex-adjusted death rate per 1,000 population by region of residence.

In 2010/2011, 10,210 Manitoba residents died, representing a rate of 8.3 deaths per 1,000 population. The age-and sex-adjusted death rate in Northern Health Region was significantly higher than Manitoba overall.



In Manitoba overall, the five most common causes of death were:

1) circulatory disease (29%)
2) cancer (27%)
3) respiratory disease (9%)
4) Injuries (7%)
5) mental/behavioural (7%)

These five causes represented 79% of all deaths (Figure 8).

Figure 8: Percentage of deaths by cause, 2010/2011

Population Health Status and Mortality

The following section provides an overview of population health status and mortality within Manitoba. This includes premature mortality rates, infant mortality rates and child mortality rates.

From 2006/2007 to 2010/2011 an average of 3,720 Manitoba residents died each year before the age of 75. For the same time period there was an annual average of 99 infant deaths and 103 deaths of children between the ages of 1 and 19. The rate of death for male children remained consistently higher than female children.

Premature Mortality

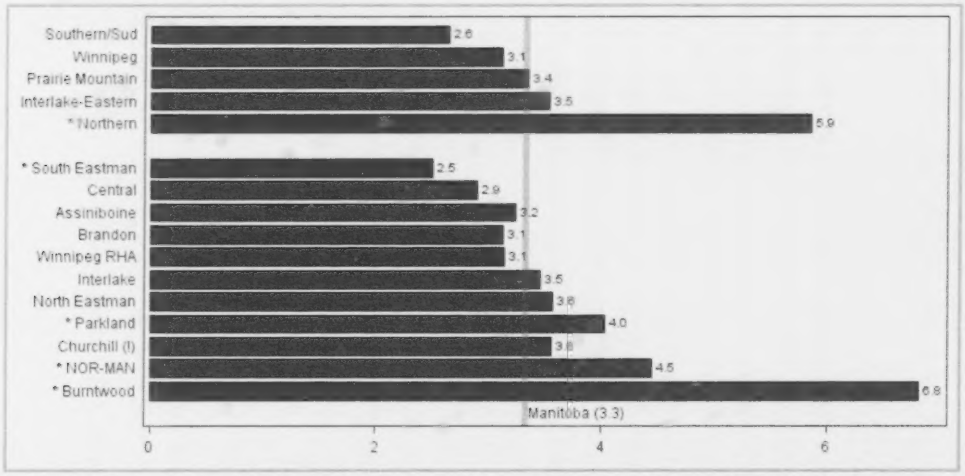


Figure 9: Age- and sex-adjusted rate of premature death per 1,000 residents under the age of 75 by RHA, 2006/2007 to 2010/2011

Figure 9 shows the age- and sex-adjusted premature mortality rate. Premature mortality is defined as death before the age of 75.

On average, there were 3,720 Manitoba residents that died before the age of 75, representing a rate of 3.3 deaths per 1,000 residents under the age of 75. The premature mortality rate in Northern Health Region was significantly higher than in Manitoba overall.

Infant Mortality

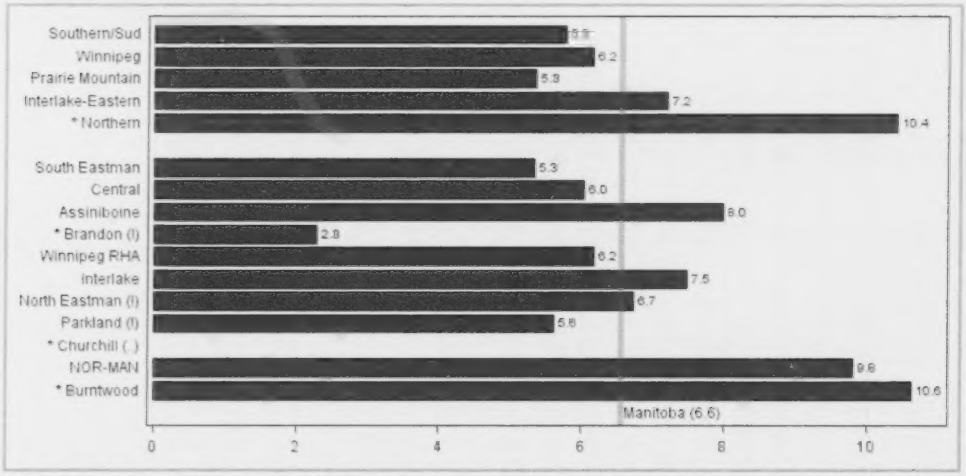
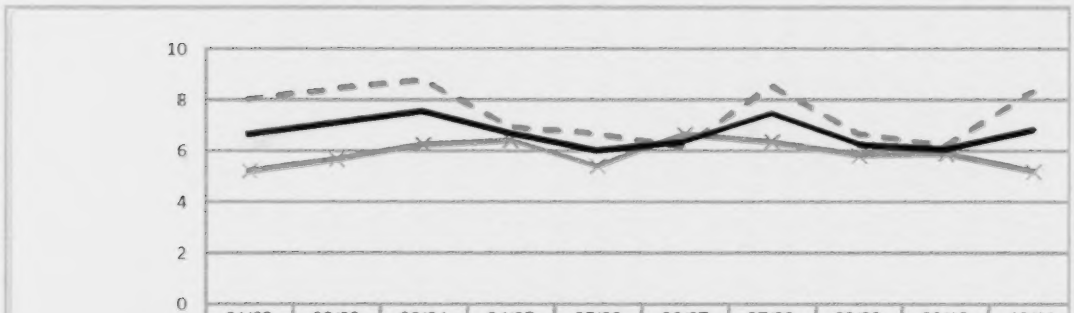


Figure 10: Crude rate of infant deaths per 1,000 infants by RHA, 2006/2007 to 2010/2011

Figure 10 shows the crude rate of infant death by RHA of residence. Infants are defined as individuals less than one year of age.

From 2006/2007 to 2010/2011, there were 496 deaths among Manitoba infants, representing a rate of 6.6 deaths per 1,000 infants. The infant mortality rate in Northern Health Region was significantly higher than Manitoba overall.

Figure 11 shows the infant mortality rate in Manitoba over time. The overall infant mortality rate in Manitoba appeared to be relatively stable over time, with the mortality rate in males being generally higher than that of females.



	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Female	5.2	5.7	6.3	6.4	5.4	6.7	6.4	5.8	5.9	5.2
Male	8.0	8.4	8.8	6.9	6.6	6.1	8.5	6.7	6.2	8.3
Manitoba	6.7	7.1	7.5	6.7	6.0	6.4	7.5	6.3	6.0	6.8

Figure 11: Crude rate of infant deaths per 1,000 infants by fiscal year

Child Mortality

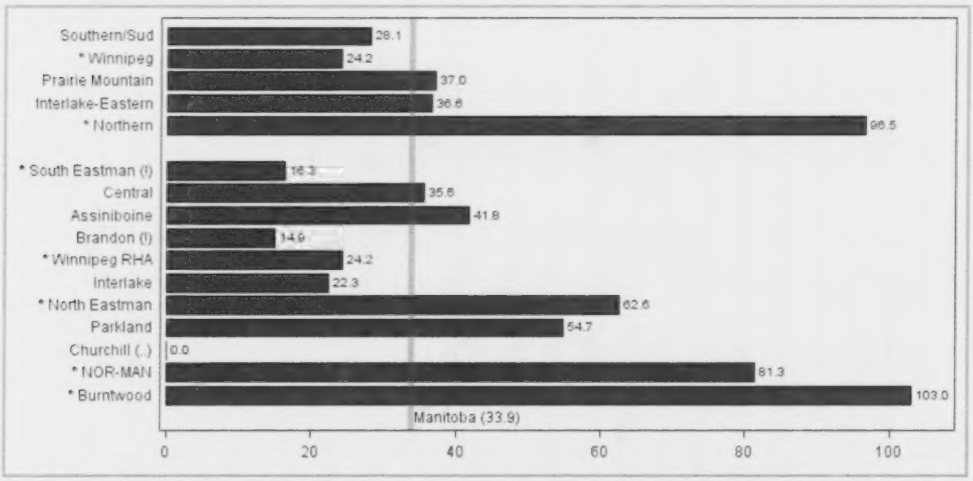
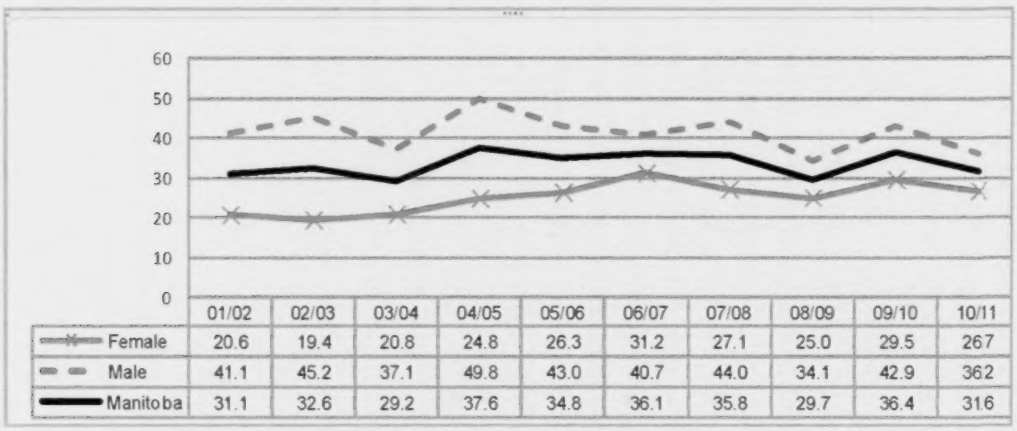


Figure 12: Age- and sex-adjusted rate of death per 100,000 children ages 1 to19 by RHA, 2006/2007 to 2010/2011

Figure 12 shows the age- and sex-adjusted rate of child death by RHA of residence. Children are defined as individuals between ages 1 and 19.

From 2006/2007 to 2010/2011, there were 515 deaths among Manitoba children. This represented a rate of 33.9 deaths per 100,000 children ages 1 to 19. The child mortality rate in Northern Health Region was significantly higher than Manitoba overall, while the rate in Winnipeg Health Region was significantly lower.

Figure 13 shows the child mortality rate in Manitoba over time. The child mortality rate in Manitoba appeared to be stable over time, with the mortality rate in males remaining consistently higher than that of females.



	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Female	20.6	19.4	20.8	24.8	26.3	31.2	27.1	25.0	29.5	26.7
Male	41.1	45.2	37.1	49.8	43.0	40.7	44.0	34.1	42.9	36.2
Manitoba	31.1	32.6	29.2	37.6	34.8	36.1	35.8	29.7	36.4	31.6

Figure 13: Rate of death per 100,000 children age 1 to 19 by fiscal year

Disease and Injury

The following section provides an overview of the burden of illness for selected diseases and chronic conditions, along with injury hospitalizations and deaths due to injury.

In 2010/2011, 28.3% of Manitobans over the age of 20 had hypertension, and 8.0% of Manitobans age one and older had diabetes.

In the same time period, there were approximately 4 heart attacks and 3 strokes for every 1,000 Manitoba residents age 40 and older.

In 2011/2012, 47.9% of Manitobans age 20 and older had one or more of the following chronic conditions: arthritis, asthma/COPD, coronary heart disease, diabetes or stroke.

For the same time period, there were 9,474 injury-related hospitalizations. In 2010/2011 there were 671 deaths where injury was the cause of death.

Hypertension (High Blood Pressure)

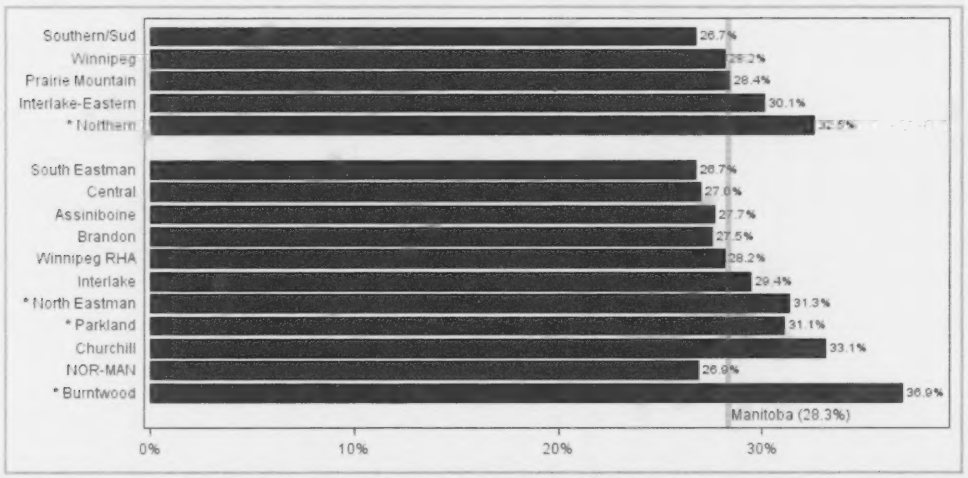


Figure 14: Age- and sex-adjusted percent of residents with hypertension age 20 and older by RHA, 2010/2011

Figure 14 shows the age- and sex-adjusted prevalence of hypertension among Manitoba residents age 20 and older by RHA of residence.

In 2010/2011, there were 256,862 Manitobans with hypertension (high blood pressure). This represented 28.3% of the total population age 20 and older. Hypertension prevalence varied across the province, as the percentage of people living with hypertension was significantly higher in Northern Health Region when compared to Manitoba overall.

Figure 15 shows hypertension prevalence in Manitoba over time. The proportion of people living with hypertension appeared to have increased steadily from 23.0% in 2001/2002 to 28.3% in 2010/2011.

*Please note that due to a change in methodology, the proportions in Figure 15 are not directly comparable to those in last year's report.

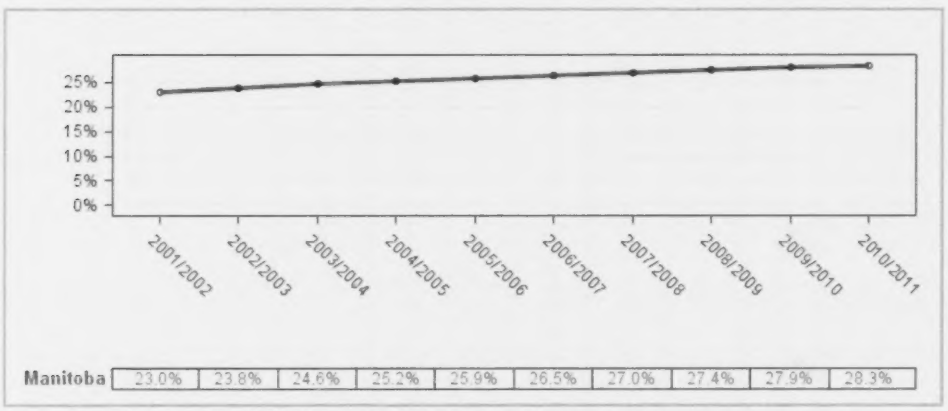


Figure 15: Percent of residents with hypertension age 20 and older by fiscal year

Diabetes

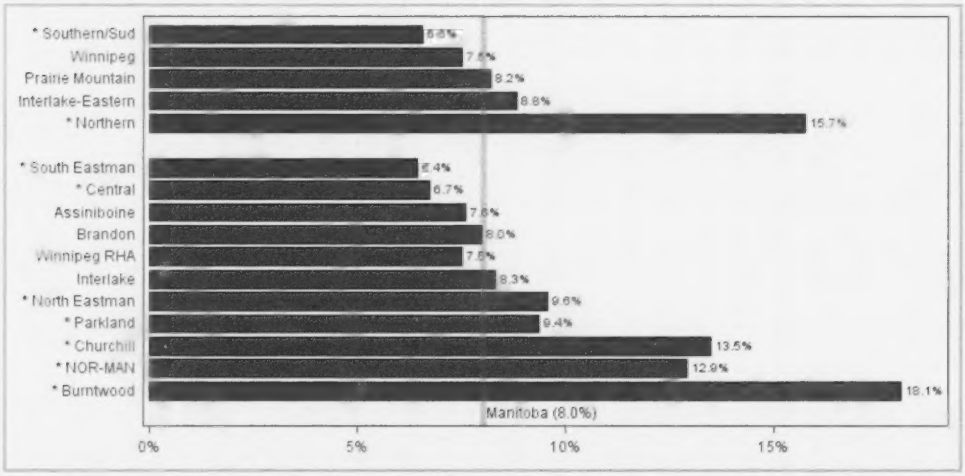


Figure 16: Age- and sex-adjusted percent of residents with diabetes age one and older by RHA, 2010/2011

Figure 16 shows the age- and sex-adjusted prevalence of diabetes among Manitoba residents age one and older by RHA of residence.

In 2010/2011, there were 97,353 Manitobans with diabetes, representing 8.0 % of the total population age one and older. Diabetes prevalence varied across the province ranging from a high of 15.7% in Northern Health Region to a low of 6.6% in Southern Health/Santé Sud.

Figure 17 shows diabetes prevalence in Manitoba over time. The proportion of people living with diabetes increased steadily from 5.6% in 2001/2002 to 8.0% in 2010/2011.

*Please note that due to a change in methodology, the proportions in Figure 17 are not directly comparable to those in last years report.

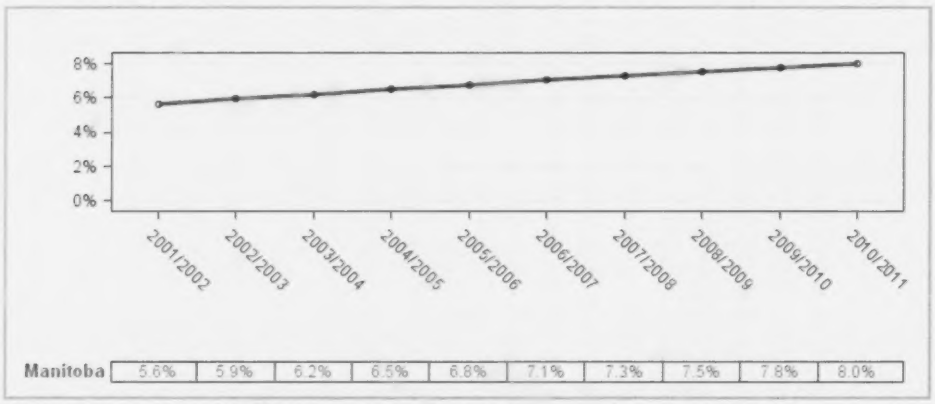


Figure 17: Percent of residents with diabetes age one and older by fiscal year

Acute Myocardial Infarction (Heart Attack)

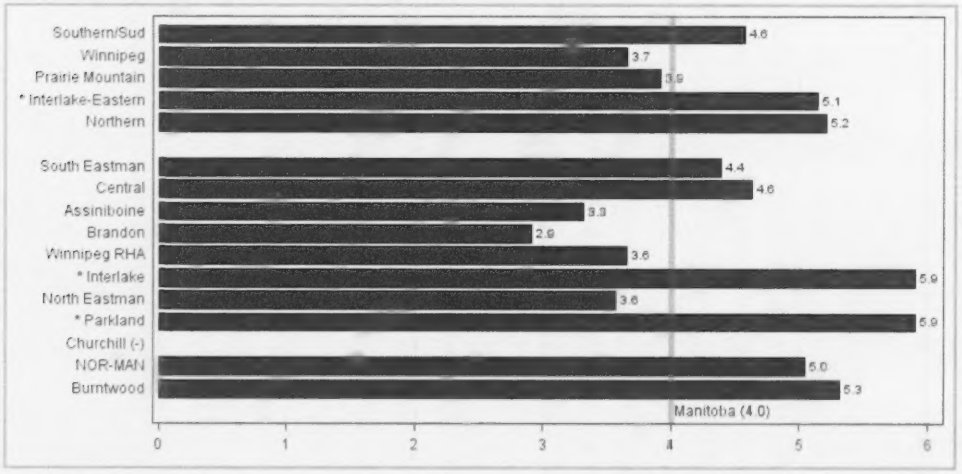


Figure 18: Age- and sex-adjusted rate of heart attack per 1,000 residents age 40 and older by RHA, 2010/2011

Figure 18 shows the age- and sex-adjusted rate of heart attack (AMI) in Manitoba residents age 40 and older by RHA of residence.

In 2010/2011, there were 2,323 heart attacks among Manitoba residents, representing a rate of 4.0 heart attacks per 1,000 population age 40 and older. Rates varied across the province. When compared to Manitoba overall, a significantly higher rate of heart attacks occurred among residents of Interlake-Eastern RHA.

Figure 19 shows the rate of heart attacks in Manitoba over time. The rate of heart attacks appeared to be on a downward trend from 2001/2002 to 2005/2006. The rate increased in 2006/2007 and then levelled off, remaining relatively stable up to 2010/2011.

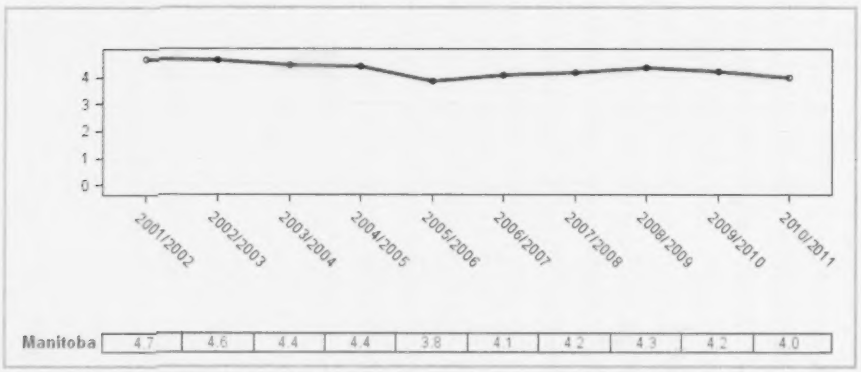


Figure 19: Rate of heart attack per 1,000 residents age 40 and older by fiscal year

Stroke

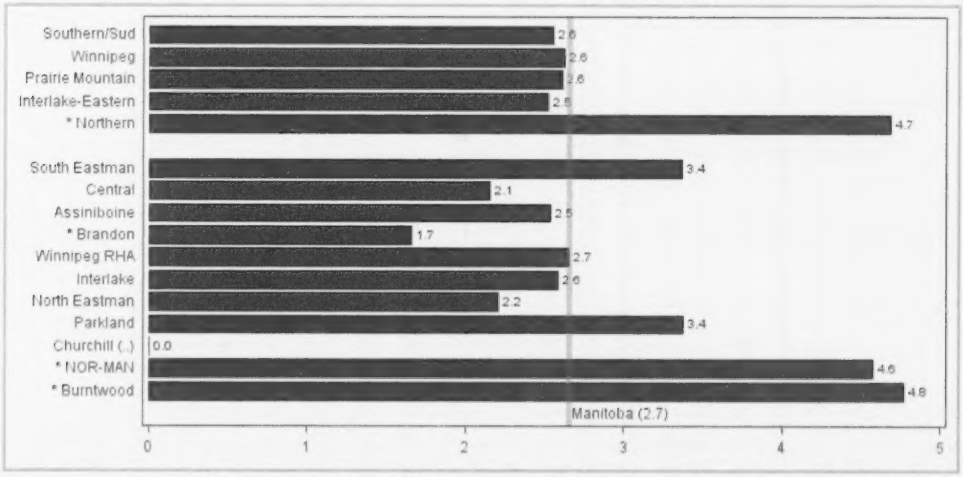


Figure 20: Age- and sex-adjusted rate of stroke per 1,000 residents age 40 and older by RHA, 2010/2011

Figure 20 shows the age- and sex-adjusted stroke rate in Manitoba residents age 40 and older by RHA of residence.

In 2010/2011, there were 1,541 strokes among Manitoba residents, representing a rate of 2.7 strokes per 1,000 population age 40 and older. Rates varied across the province. When compared to Manitoba overall, a significantly higher rate of strokes occurred among Northern Health Region residents.

Figure 21 shows the stroke rate in Manitoba residents over time. The rate of strokes decreased over time, from 3.2 per 1,000 population in 2001/2002 to 2.7 per 1,000 population in 2010/2011.

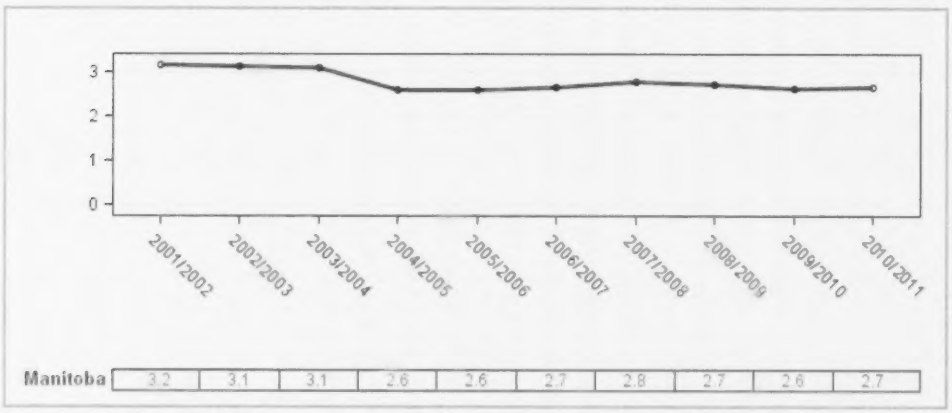


Figure 21: Rate of stroke per 1,000 residents age 40 and older by fiscal year

Chronic Conditions

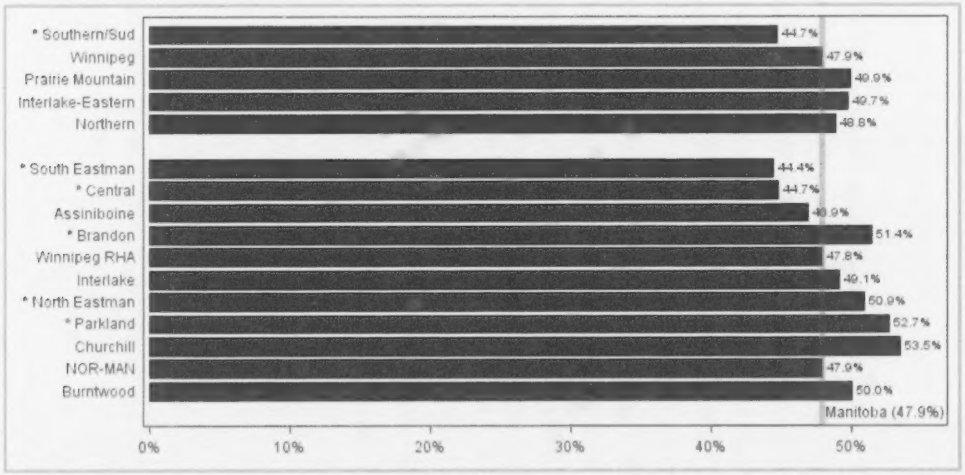


Figure 22: Age- and sex-adjusted percent of residents with chronic conditions age 20 and older by RHA, 2011/2012

Figure 22 shows the age- and sex-adjusted percent of people living with chronic conditions. The chronic condition rate is defined as the percent of the population age 20 and older having one or more of the following conditions: arthritis, asthma/COPD, coronary heart disease, diabetes or stroke.

In 2011/2012, 427,050 Manitobans age 20 and older received medical care for one or more chronic conditions, representing 47.9% of the Manitoba population of the same age group. The percent of the population with at least one chronic condition ranged from 44.7% in Southern Health/Santé Sud to 49.9% in Prairie Mountain Health.

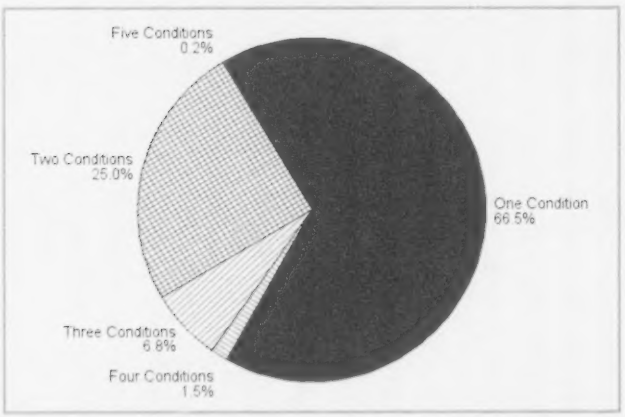


Figure 23: Percentage of residents with chronic conditions age 20 and older, by the number of chronic conditions, 2011/2012

Of those residents living with a chronic condition, Figure 23 shows the proportion with one or multiple chronic conditions. Two-thirds (66.5%) of those with a chronic condition had just one condition, 25.0% had two conditions and the remaining 8.5% had three or more chronic conditions.

Injury Hospitalization

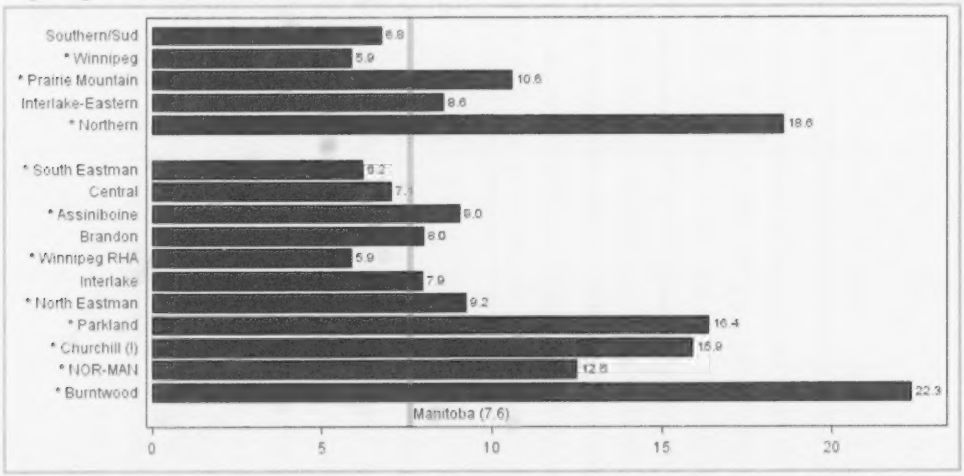


Figure 24: Age- and sex-adjusted rate of hospitalization for injury per 1,000 residents by RHA, 2011/2012

Figure 24 shows the age- and sex-adjusted rate of injury hospitalizations per 1,000 residents.

In 2011/2012, there were 9,474 hospitalizations related to injury among Manitoba residents, representing a rate of 7.6 injury hospitalizations per 1,000 population. Rates varied significantly across the province. Residents of Northern Health Region had over two times the rate of injury hospitalizations compared to Manitoba overall. Residents of Winnipeg Health Region had the lowest injury hospitalization rates.

Figure 25 shows the rate of injury hospitalization in 2011/2012 among Manitobans by age and sex. An elevated rate of injury hospitalization rates was evident for those ages 15 to 29, particularly for males. The rate in males remained higher than females until the age of 55. At the age of 60 the female rate exceeded that of males. Injury hospitalization rates for both sexes began to increase at the age of 65 and continued to increase exponentially up to age 90+.

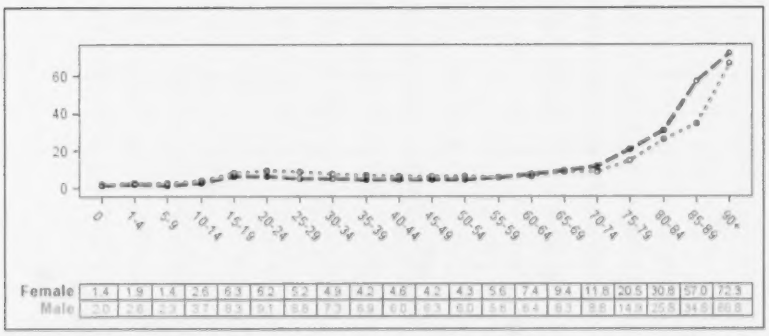


Figure 25: Age- and gender-specific rate of hospitalization for injury per 1,000 residents, 2011/2012

Injury Mortality

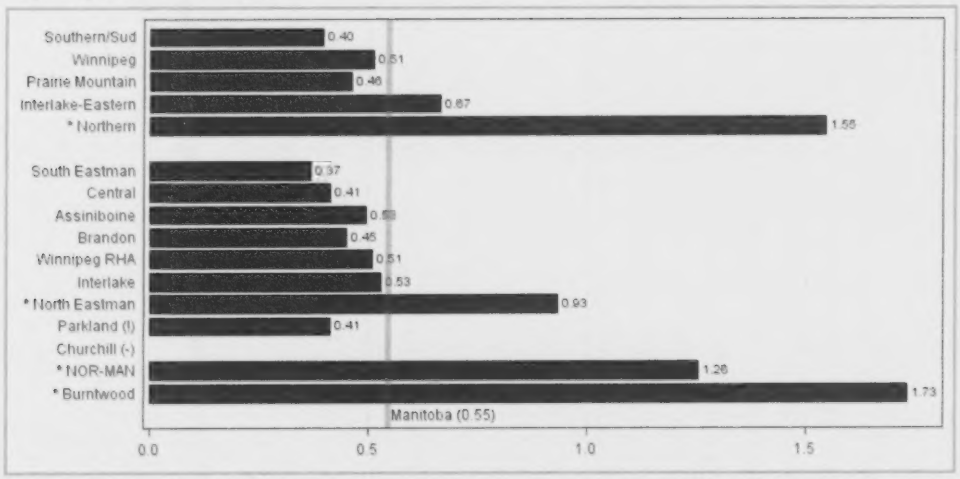
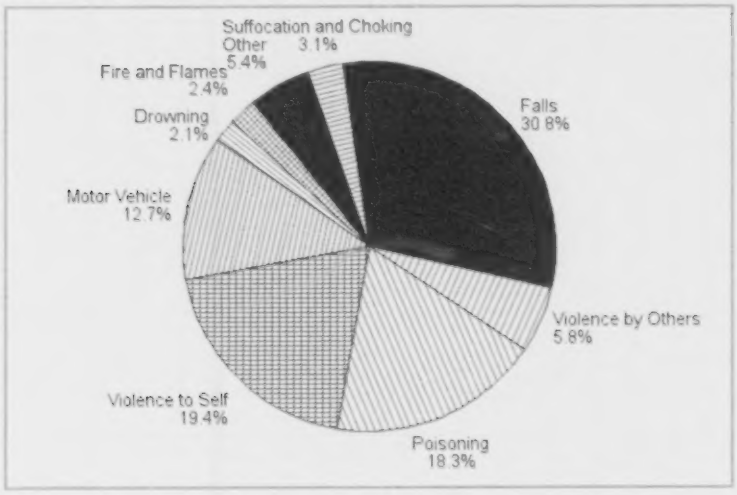


Figure 26: Age- and sex-adjusted rate of death due to injury per 1,000 residents by RHA, 2010/2011

Figure 26 shows the age- and sex-adjusted rate of death for which an injury was the cause, per 1,000 residents.

In 2010/2011, there were 671 deaths due to injury for Manitoba residents, representing a rate of 0.55 deaths per 1,000 population. The age-and sex-adjusted death rate in Northern Health Region was significantly higher than Manitoba overall, having an injury mortality rate almost three times that of the rate in Manitoba.



In Manitoba overall the five most common cause of injury-related deaths were:

1) falls (30.8%)
2) violence to self (19.4%)
3) poisoning (18.3%)
4) motor vehicle (12.7%)
5) violence by others (5.8%)

These causes combined represented 87.0% of all injury-related deaths (Figure 27).

Figure 27: Percentage of injury deaths, by cause, 2010/2011

Prevalence of Mental Illness and Use of Services

The following section provides an overview of the prevalence of mental illness. Between 2007/2008 and 2011/2012, approximately 25% of Manitobans age 10 and older received medical care for at least one of the following mental illnesses: depression, anxiety, substance abuse, personality disorder, or schizophrenia.

In 2011/2012 there were approximately 639 hospitalizations related to self-inflicted injury for Manitoba residents. This represented a rate of 58.5 self-inflicted injury hospitalizations per 100,000 residents age 10 and older.

On average, there were 178 suicides per year for the period of 2006/2007 to 2010/2011. This represented a suicide rate of less than one for every thousand Manitoba residents.

Cumulative Mental Illness

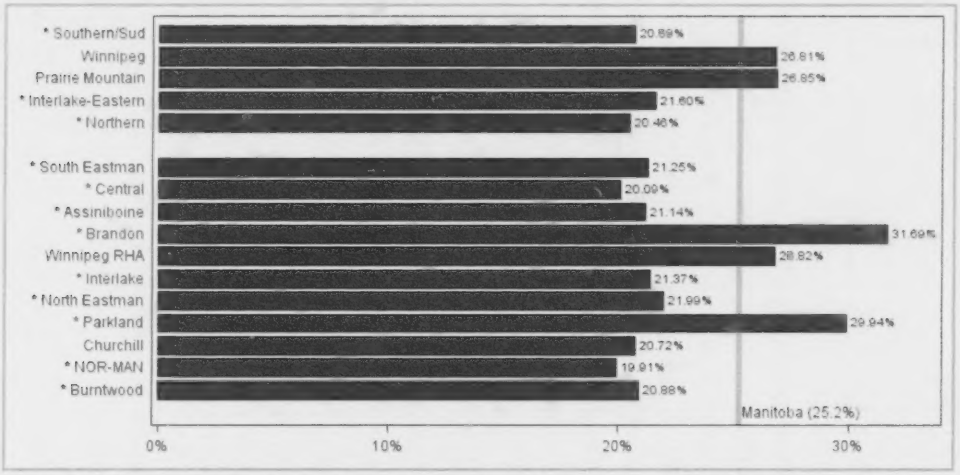


Figure 28: Age- and sex-adjusted prevalence of cumulative mental illness among residents age 10 and older by RHA, 2007/2008 to 2011/2012

Figure 28 shows the age- and sex-adjusted prevalence of cumulative mental illness among Manitoba residents age 10 and older by RHA of residence. Cumulative mental illness is defined as receiving medical care for at least one of: depression, anxiety disorders, substance abuse, schizophrenia or a personality disorder.

From 2007/2008 to 2011/2012, there were 258,815 Manitoba residents treated for at least one of these mental illnesses, representing 25.2% of Manitoba residents age 10 and older. The age- and sex-adjusted rates in Southern Health/Santé Sud, Interlake-Eastern RHA and Northern Health Region were significantly lower than the Manitoba rate.

Mood and Anxiety Disorders

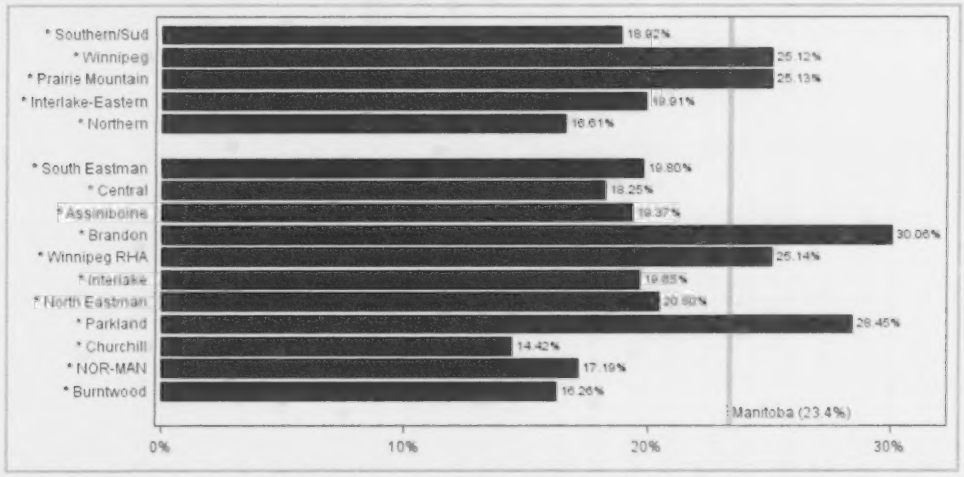


Figure 29: Age- and sex-adjusted prevalence of mood and anxiety disorders among residents age 10 and older by RHA, 2007/2008 to 2011/2012

Figure 29 shows the age- and sex-adjusted prevalence of mood and anxiety disorders among Manitoba residents age 10 and older by RHA of residence.

From 2007/2008 to 2011/2012, there were 239,776 Manitoba residents treated for mood and anxiety disorders, representing 23.4% of Manitoba residents age 10 and older. The age- and sex-adjusted rates in Winnipeg Health Region and Prairie Mountain Health were significantly higher than the Manitoba rate, while all other regions were significantly lower.

*Please note that anxiety and depression disorders have been reclassified this year under mood and anxiety disorders.

Personality Disorders

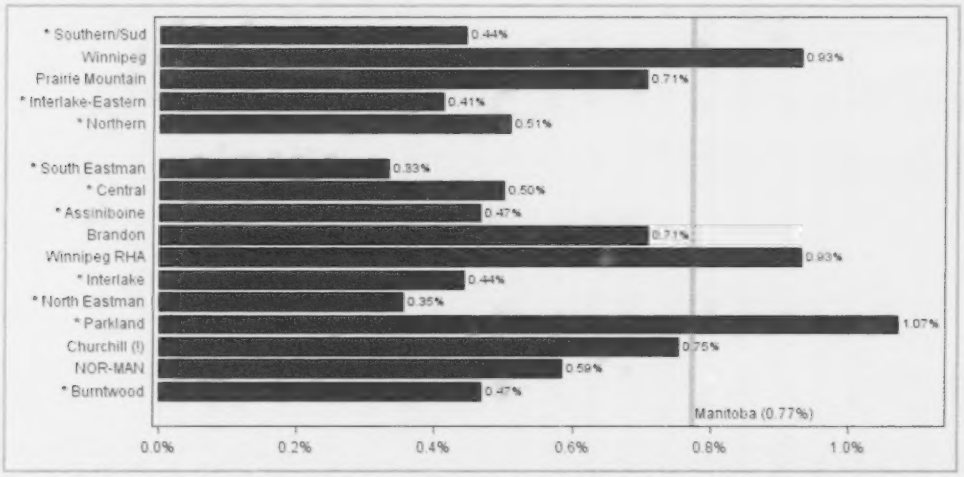


Figure 30: Age- and sex-adjusted prevalence of personality disorders among residents age 10 and older by RHA, 2007/2008 to 2011/2012

Figure 30 shows the age- and sex-adjusted prevalence of personality disorders among Manitoba residents age 10 and older by RHA of residence.

From 2007/2008 to 2011/2012, there were 7,942 Manitoba residents treated for a personality disorder, representing 0.77% of Manitoba residents age 10 and older. The age- and sex-adjusted rates were significantly lower in Southern Health/Santé Sud, Interlake-Eastern RHA and Northern Health Region when compared to the Manitoba rate.

Schizophrenia

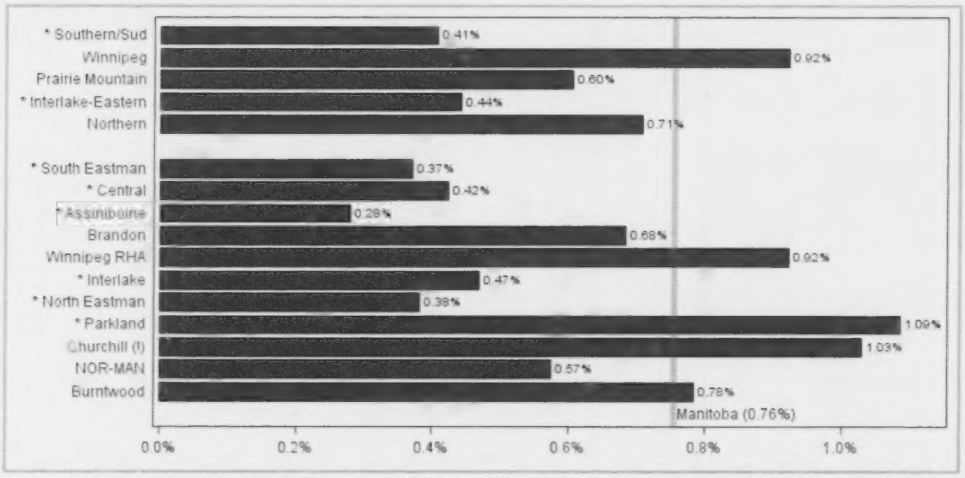


Figure 31: Age- and sex-adjusted prevalence of schizophrenia among residents age 10 and older by RHA, 2007/2008 to 2011/2012

Figure 31 shows the age- and sex-adjusted prevalence of schizophrenia among Manitoba residents age 10 and older by RHA of residence.

From 2007/2008 to 2011/2012, there were 7,750 Manitoba residents treated for schizophrenia, representing 0.76% of Manitoba residents age 10 and older. The age- and sex-adjusted rates in Southern Health/Santé Sud and Interlake-Eastern RHA were significantly lower than Manitoba overall.

Substance Abuse

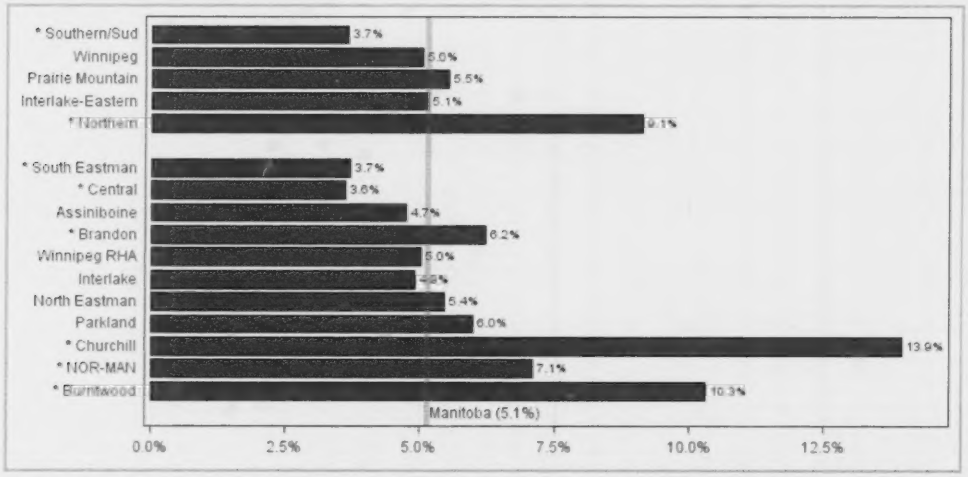


Figure 32: Age- and sex-adjusted prevalence of substance abuse among residents age 10 and older by RHA, 2007/2008 to 2011/2012

Figure 32 shows the age- and sex-adjusted prevalence of substance abuse among Manitoba residents age 10 and older by RHA of residence.

From 2007/2008 to 2011/2012, there were 52,646 Manitoba residents treated for substance abuse, representing 5.1% of Manitoba residents age 10 and older. The age- and sex-adjusted rate for Northern Health Region was almost 2 times higher than the Manitoba rate.

Hospitalization for Self-Inflicted Injury

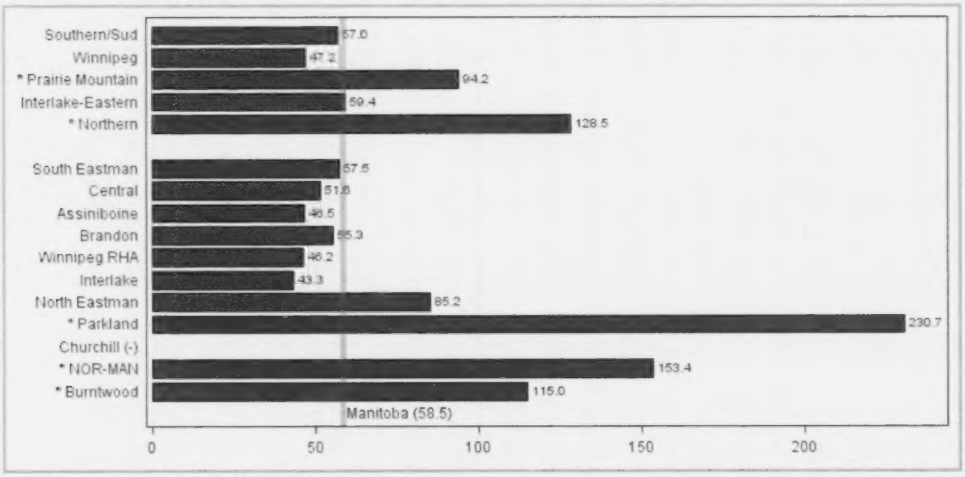


Figure 33: Age- and sex-adjusted rate of hospitalization due to self-inflicted injury per 100,000 residents age 10 and older by RHA, 2011/2012

Figure 33 shows the age- and sex-adjusted rate of hospitalization for which a self-inflicted injury was the cause, per 100,000 residents age 10 and older.

In 2011/2012, there were 639 hospitalizations due to self-inflicted injury among Manitoba residents, representing a rate of 58.5 hospitalizations per 100,000 population. The age- and sex-adjusted hospitalization rates in Northern Health Region and Prairie Mountain Health were significantly higher than Manitoba overall, with Northern Health Region residents having a self-inflicted injury rate over two times that of the Manitoba rate.

Suicide

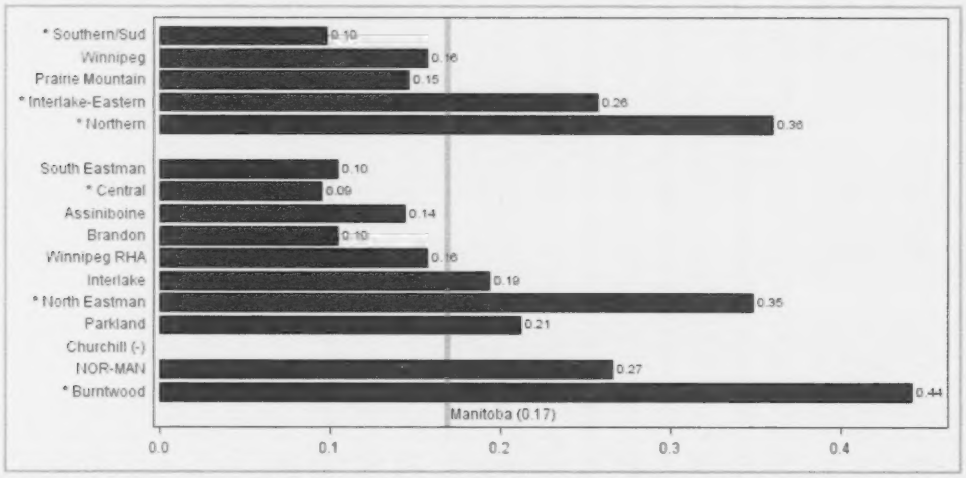


Figure 34: Age- and sex-adjusted rate of death due to suicide per 1,000 residents age 10 and older by RHA, 2006/2007 to 2010/2011

Figure 34 shows the age- and sex-adjusted rate of death for which suicide was the cause, per 1,000 Manitoba residents age 10 and older.

From 2006/2007 to 2010/2011, there were 889 deaths due to suicide among Manitoba residents, representing a rate of 0.17 deaths per 1,000 population. The age- and sex-adjusted death rates in Northern Health Region and Interlake-Eastern RHA were significantly higher than Manitoba overall.

Figure 35 shows the death rate for suicide by age and sex. From 2006/2007 to 2010/2011, the rate for males was higher than females for all age groups with the exception of ages 10 to 14.

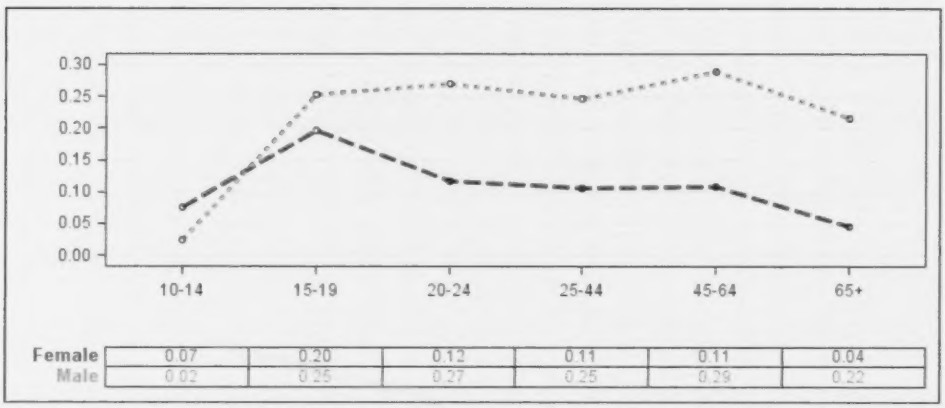


Figure 35: Crude rate of suicide deaths per 1,000 residents by age and gender, 2006/2007 to 2010/2011

Health Services Insurance Plan

Manitoba residents who are Canadian citizens or have immigrant status, and who are either a permanent resident of Manitoba or reside in Manitoba for at least six months of the year, are eligible for Manitoba Health coverage.

The Health Services Insurance Plan operates outside the Provincial Consolidated Fund and provides for payment of insured services for hospitals, personal care homes, and health care providers on behalf of Manitoba residents. Other plans include the prescription drugs program (Pharmacare), Ambulance, Air Ambulance, and Northern Patient Transportation programs.

Insured Services per Capita

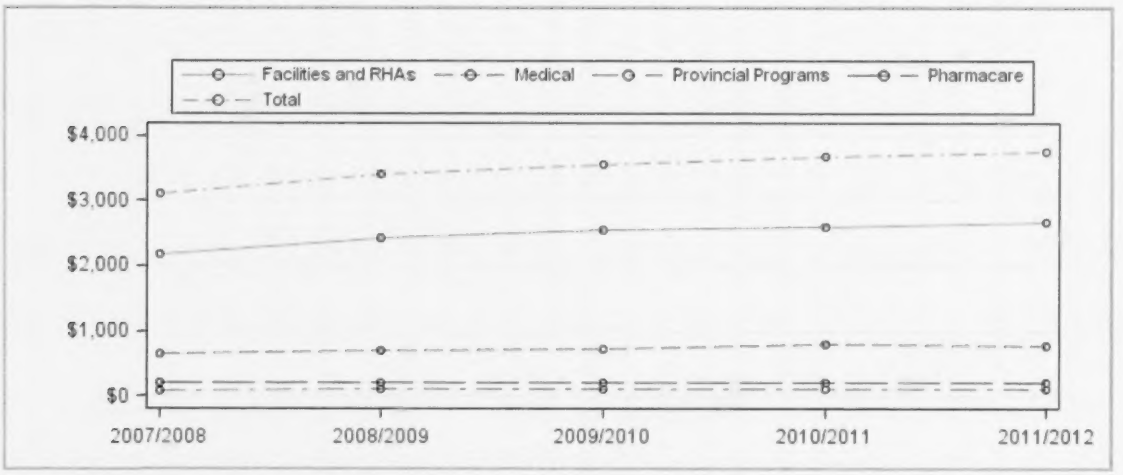


Figure 36: Crude rate of the cost of insured services per capita by fiscal year

Figure 36 represents the cost per capita of insured services in Manitoba.

In 2011/2012, approximately four billion dollars was spent on insured services in Manitoba, representing $3,746 per capita.

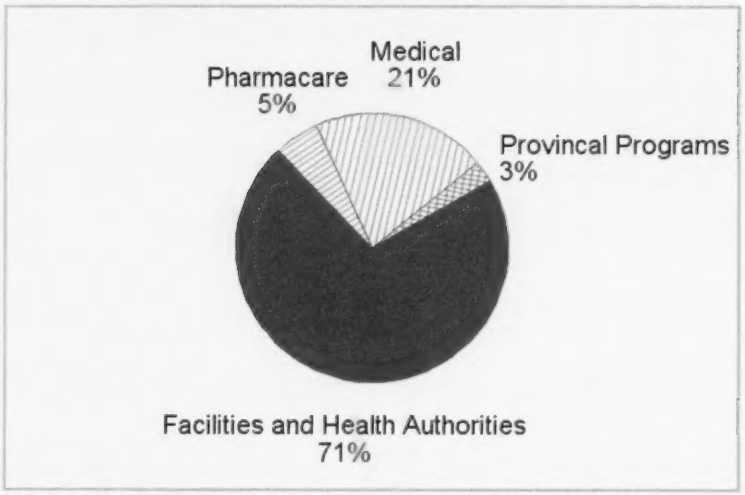


Figure 37 shows the distribution of total costs. In 2011/2012, 71% of the total cost was attributed to facilities and regional health authorities followed by medical services for fee for service physicians (21%), Pharmacare programs (5%) and provincial programs (3%).

Figure 37: Percentage of total cost, 2011/20112

Use of Medical Services

The following section provides an overview of the use of medical services in Manitoba. This includes number of physicians and nurses, physician use, continuity of care and ambulatory care visit rates.

In 2011 there were 17,265 nurses and 2,472 physicians registered in Manitoba.

Nearly eighty percent (78.4%) of Manitoba residents saw a physician at least once in 2011/2012. On average these Manitobans saw a physician about four times. Nearly three-quarters (73.4%) of residents saw the same physician for more than 50% of their ambulatory visits.

Number of General Practitioners and Specialists

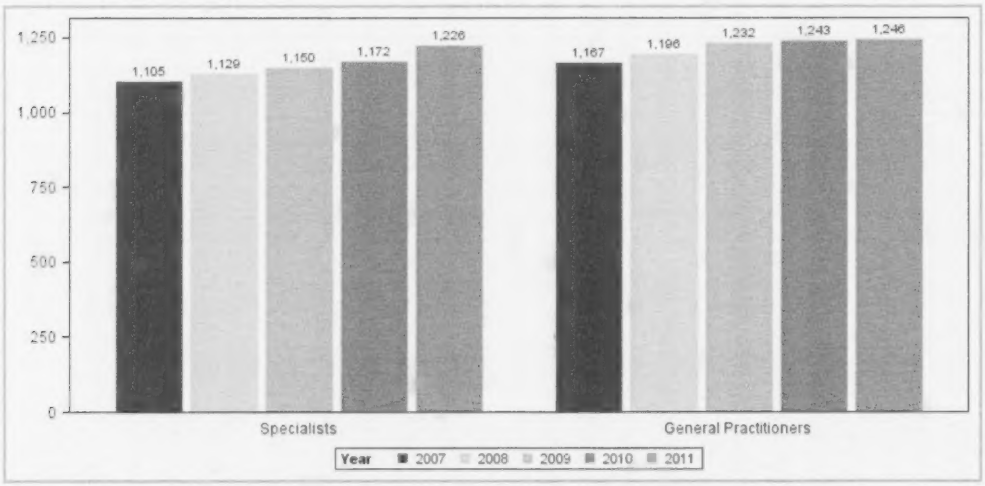


Figure 38: Number of General Practitioners and Specialists in Manitoba, 2007 - 2011

Figure 38 shows the number of general practitioners and specialists in Manitoba as reported by the College of Physicians and Surgeons of Manitoba by calendar year.

For 2011, there were a total of 2,472 physicians in Manitoba. This consisted of nearly even numbers of family physicians and specialists.

*Please note that due to data conversion requirements, the total number of physicians for 2010 has been corrected to 2,415 (1,172 specialists and 1,243 family physicians).

Number of Nurses and Nurse Practitioners

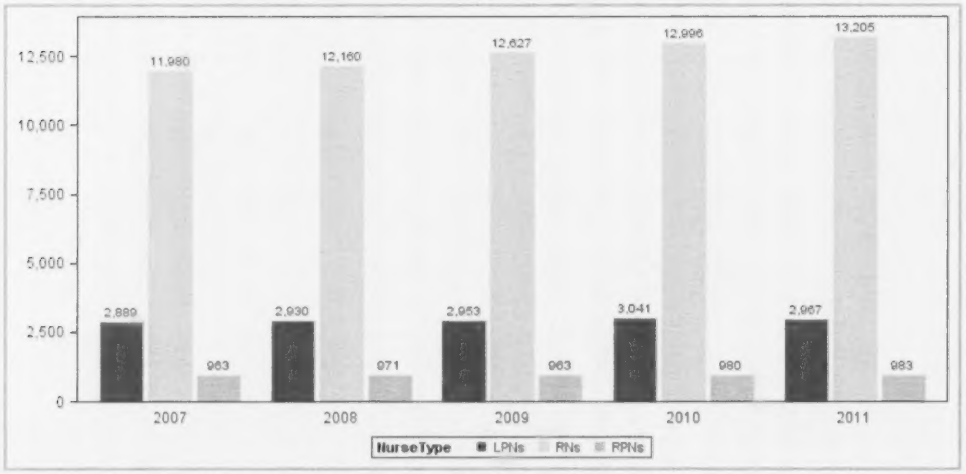


Figure 39: Number of RNs, LPNs and RPNs in Manitoba, 2007-2011

Figure 39 shows the number of registered nurses (RNs), licensed practical nurses (LPN)s and registered psychiatric nurses (RPNs) as reported by the College of Registered Nurses of Manitoba.

For 2011, there were 17,155 RNs, LPNs and RPNs registered with the College of Registered Nurses of Manitoba, of which 77% were registered nurses. The remaining 23% consisted of registered psychiatric nurses and licensed practical nurses.

Figure 40 shows the number of nurse practitioners in Manitoba. The number of registered nurse practitioners increased from 49 in 2007 to 110 in 2011.

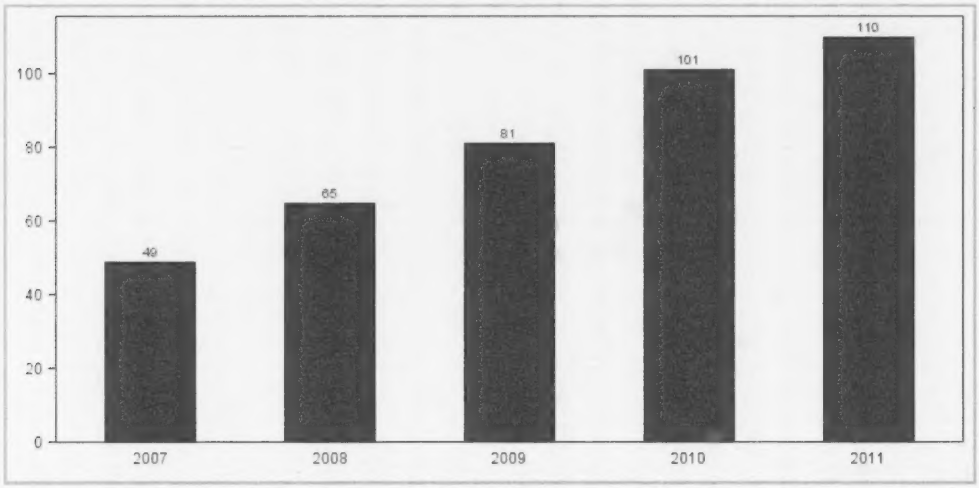


Figure 40: Number of Nurse Practitioners in Manitoba, 2007-2011

Physician Use

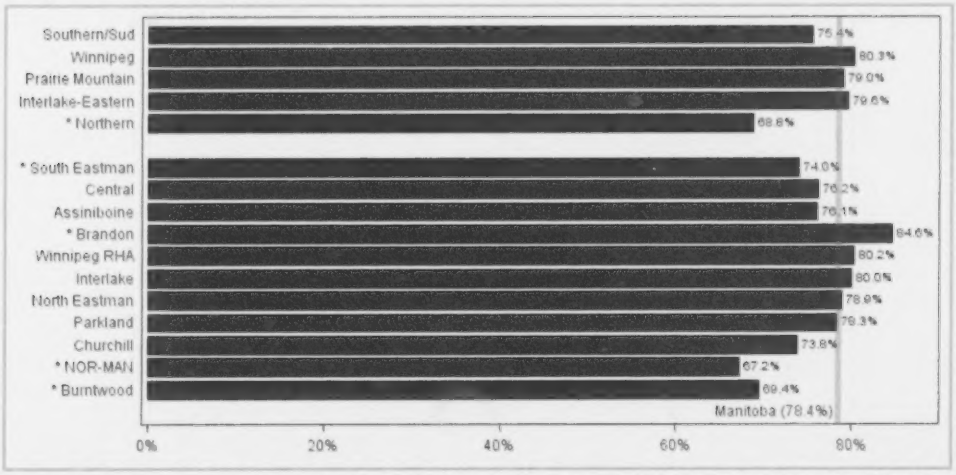


Figure 41: Age- and sex-adjusted percent of residents who used physician services by RHA, 2011/2012

Figure 41 shows the age- and sex-adjusted percent of Manitobans who used physician services by RHA of residence.

In 2011/2012, 78.4% of Manitoba residents saw a physician at least once during the year.

Residents of Northern Health Region appeared to have lower rates. However, these values are affected by missing data for services provided by salaried physicians and should be interpreted with caution.

Continuity of Care

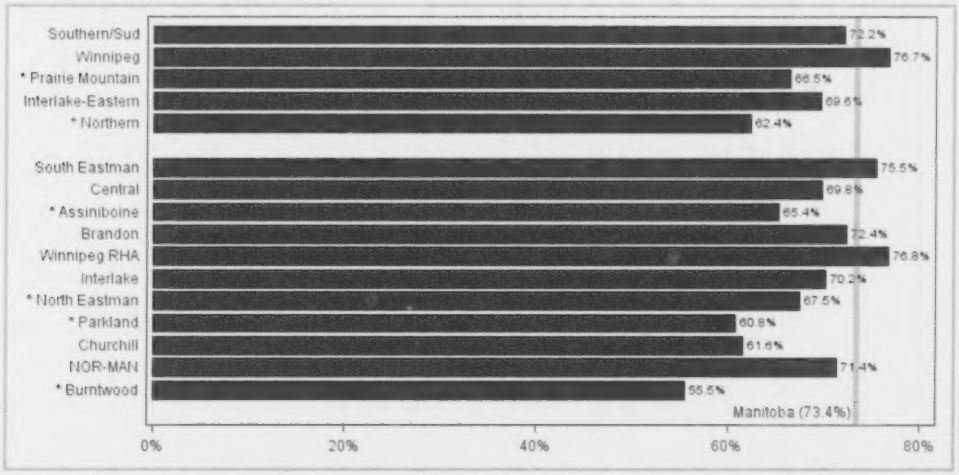
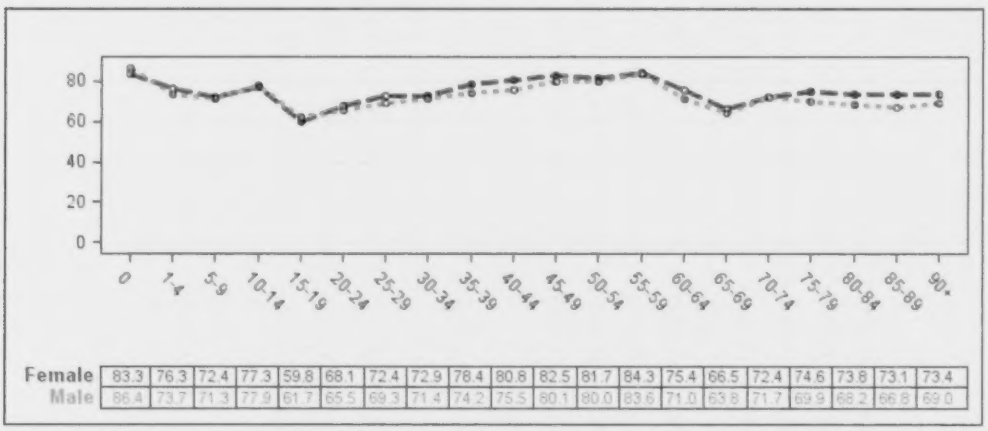


Figure 42: Age- and sex-adjusted percent of residents with more than 50% of ambulatory visits to the same physician by RHA, 2010/2011 to 2011/2012

Figure 42 shows the age- and sex-adjusted percent of Manitoba residents with more than 50% of ambulatory visits made to the same physician, by RHA of residence.

From 2010/2011 to 2011/2012, 73.4% of residents had more than 50% of their visits to the same physician. Northern Health Region and Prairie Mountain Health had a significantly lower continuity of care when compared to the Manitoba rate.

Figure 43 shows the age- and sex-specific percent of residents with at least 50% of visits made to the same physician. Manitoba residents between the ages of 15 and 19 had a continuity of care that was lower than that of other ages.



	0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+
Female	83.3	76.3	72.4	77.3	59.8	68.1	72.4	72.9	78.4	80.8	82.5	81.7	84.3	75.4	66.5	72.4	74.6	73.8	73.1	73.4
Male	86.4	73.7	71.3	77.9	61.7	65.5	69.3	71.4	74.2	75.5	80.1	80.0	83.6	71.0	63.8	71.7	69.9	68.2	66.8	69.0

Figure 43: Crude percent of residents with more than 50% of ambulatory visits to the same physician, by age and sex, 2010/2011 to 2011/2012

Ambulatory Care Visits

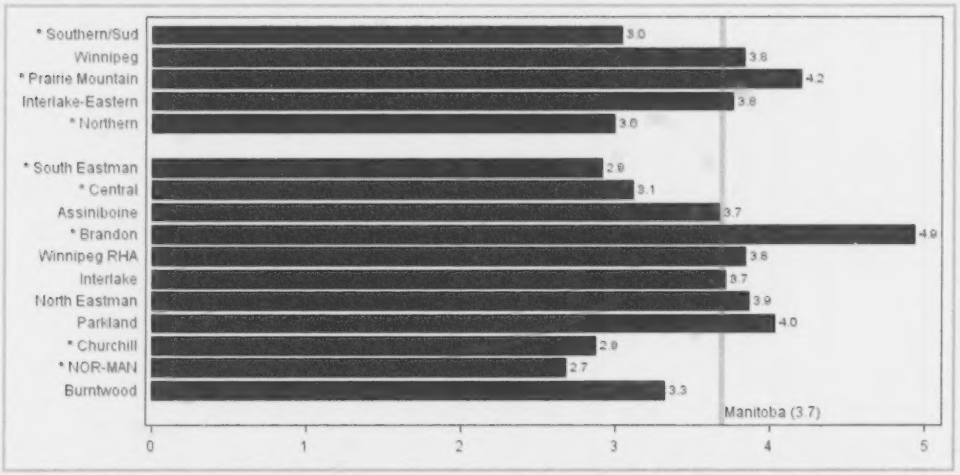


Figure 44: Age- and sex-adjusted average number of ambulatory care visits by RHA, 2011/2012

Figure 44 shows the age- and sex-adjusted average number of visits to a physician per Manitoba resident. Services provided to a patient while admitted to hospital and visits for prenatal care have been excluded.

In 2011/2012, there was an average of almost four visits to physicians per Manitoba resident.

Prairie Mountain Health's visit rate was significantly higher than the Manitoba visit rate.

In Manitoba overall, the most common reason for a physician visit was respiratory disease, representing 11.1% of all visits (Table 1).

Reason for Visit	Percentage of Visits
Respiratory	11.1%
Factors Influencing Health Status & Contact with Health Services	10.7%
Circulatory	10.0%
Symptoms, Signs, Ill-Defined Conditions	9.6%
Musculoskeletal System & Connective Tissue	9.5%
Mental Disorders	8.9%
Endocrine, Metabolic Disease, Immunologic Disorders	7.6%
Nervous System & Sense Organs	6.0%
Injury & Poisoning	5.3%
Skin & Subcutaneous Tissue	5.2%
Genitourinary	5.0%
Digestive	4.1%
Infectious and Parasitic Diseases	3.4%
Neoplasms	1.5%
Disease of Blood, Blood-Forming Organs	1.4%
Congenital Anomalies	0.3%
Pregnancy, Childbirth, Puerperium	0.2%
Conditions Orginating in Perinatal Period	0.1%

Table 1: Percentage of visits by reason, 2011/2012

Use of Hospital Services

The following section provides an overview of the use of hospital services, appropriateness of care and proportion of alternate level of care days in Manitoba. This includes use of hospitals, hospital separation rates, location of hospitalization by RHA, hospitalizations for ambulatory care sensitive conditions and alternate level of care days.

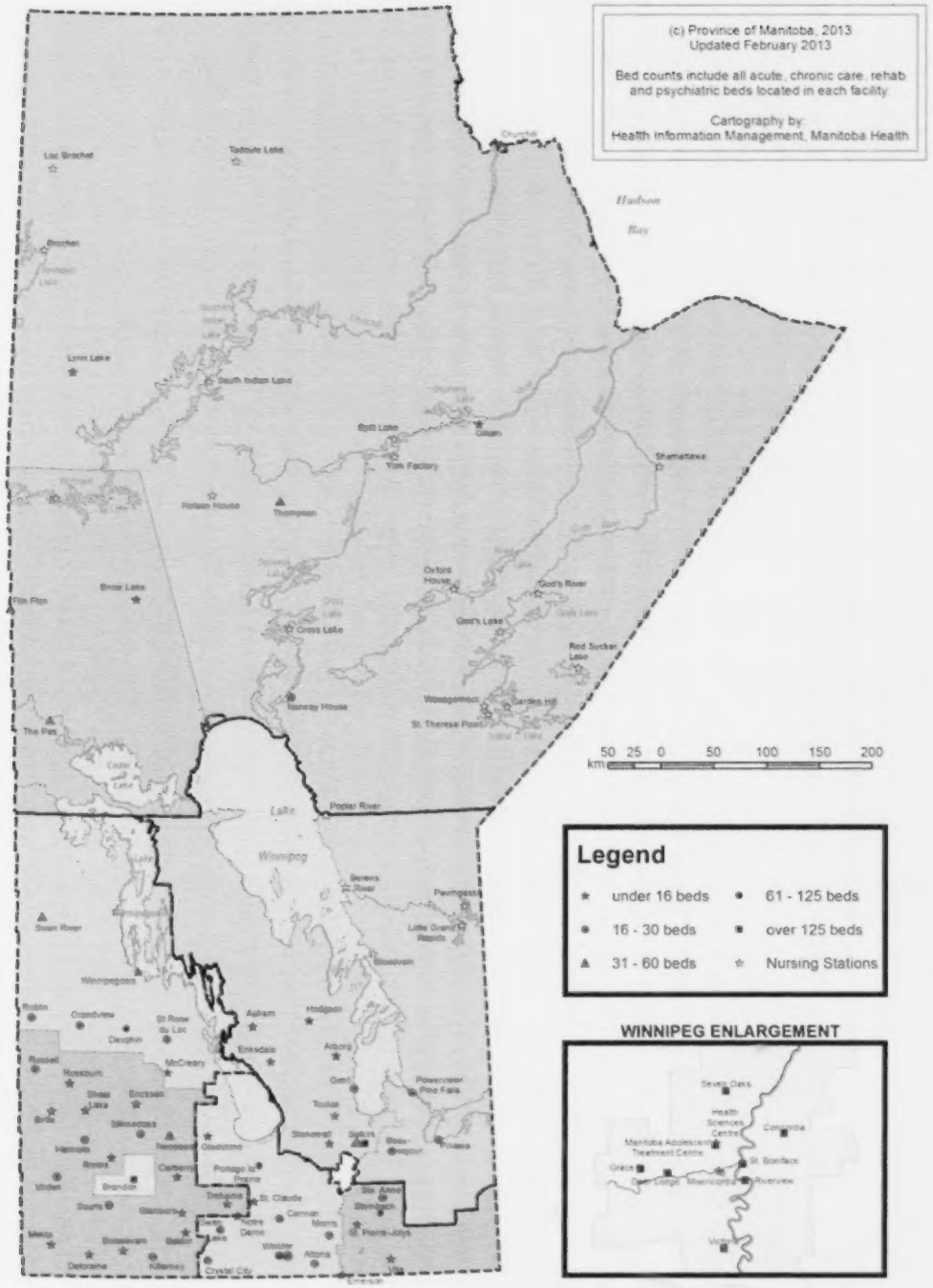
In 2011/2012, there were 75 acute and chronic care facilities along with 2 long term psychiatric facilities.

Eight percent of Manitoba residents were admitted as an inpatient to a hospital in 2011/2012. In total, there were 121,950 inpatient hospitalizations.

Ambulatory care sensitive conditions (ACSC) is a measure of access to appropriate medical care. While not all admissions for these conditions are avoidable, significantly elevated rates often reflect problems obtaining access to primary care. In 2011/2012, the rate of hospitalization for ACSC was 7.4 per 1,000 residents.

Alternate level of care (ALC) days are inpatient days in which a patient no longer requires the level of care their care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting. In 2011/2012, 3.8% of all hospitalized cases had one or more ALC days associated with it.

Map of Hospitals by Facility Size



Use of Hospitals

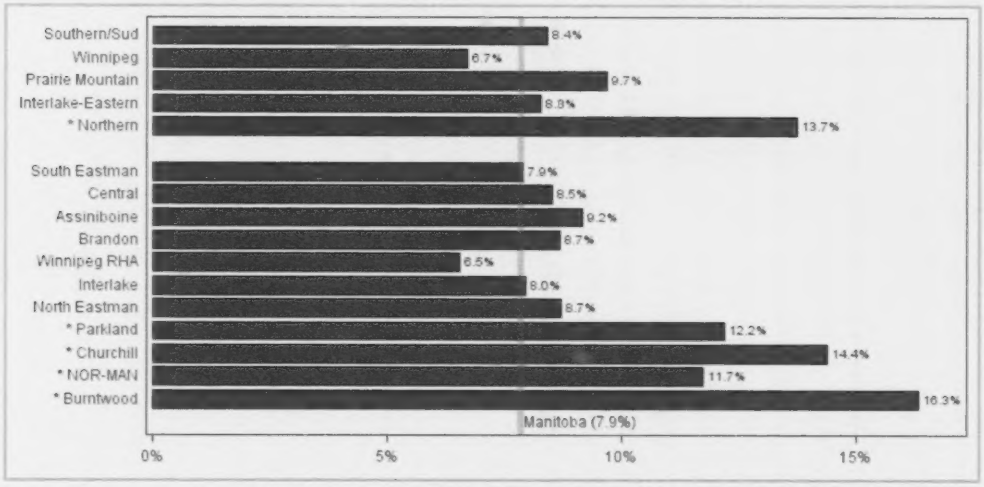


Figure 45: Age- and sex-adjusted percent of residents admitted to hospital by RHA, 2011/2012

Figure 45 shows the age- and sex-adjusted percent of Manitobans who were admitted to hospital by RHA of residence.

In 2011/2012, 7.9% of Manitoba residents were admitted at least once to a hospital.

Northern Health Region had a significantly higher percentage of residents with one or more admissions than Manitoba overall.

Hospital Separations

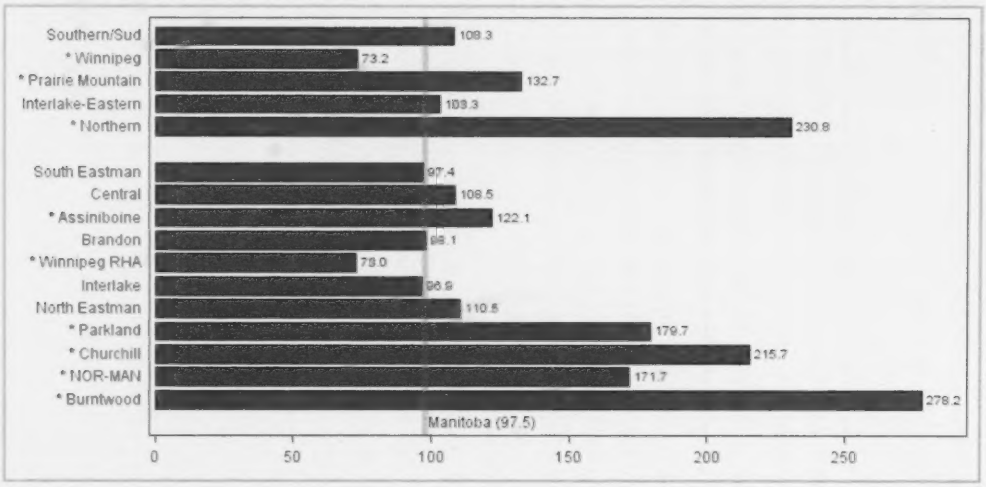


Figure 46: Age- and sex-adjusted rate of separation for inpatient hospitalizations per 1,000 residents by RHA, 2011/2012

Figure 46 shows the age- and sex-adjusted rate of separation for inpatient hospitalizations, per 1,000 residents. A separation is defined as anytime a patient leaves a facility because of a discharge, transfer or death.

In 2011/2012, there were 121,950 inpatient separations among Manitoba residents, representing a rate of 97.5 per 1,000 Manitoba residents. Rates in Northern Health Region and Prairie Mountain Health were significantly higher than Manitoba overall.

Location of Hospitalization by Region of Residence

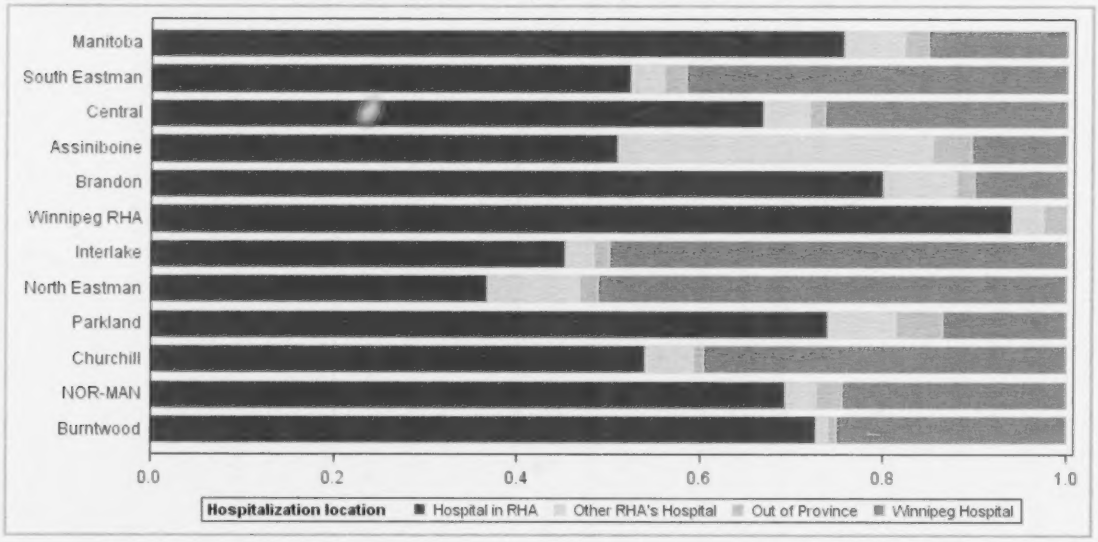


Figure 47: Crude percent of hospitalization by location and RHA, 2011/2012

Figure 47 shows the crude proportion of where hospitalizations took place by region of patient's residence.

In 2011/2012, there were 121,950 inpatient separations among Manitoba residents.

About 76% of Manitoba residents were hospitalized within the region that they lived in, 15% of residents living outside of Winnipeg were hospitalized in Winnipeg, 6.6% were hospitalized in a different region and 2.6% were hospitalized outside the province.

Hospitalization for Ambulatory Care Sensitive Conditions

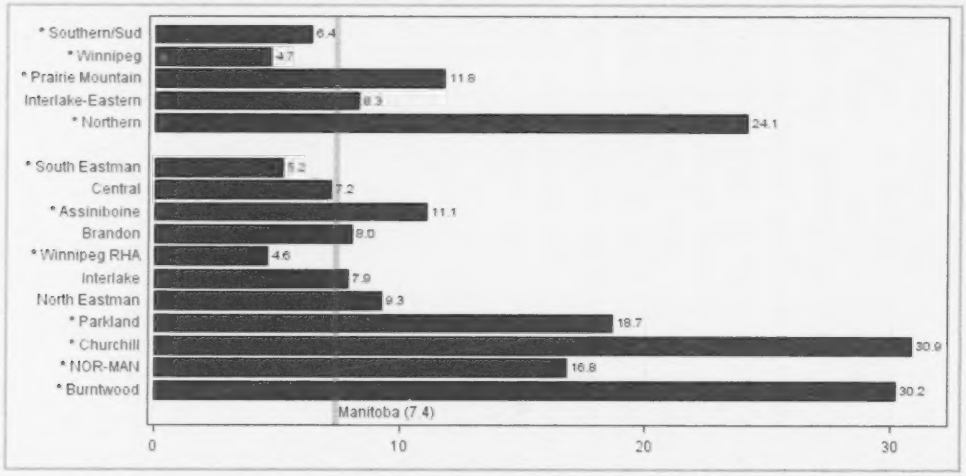


Figure 49: Age- and sex-adjusted rate of ambulatory care sensitive conditions per 1,000 residents by RHA, 2011/2012

Figure 49 shows the age- and sex-adjusted rate of hospitalization for ambulatory care sensitive conditions (ACSC) by RHA of residence. ACSC are a set of conditions comprised of 17 diseases/diagnoses which have been identified as observably responsive to primary care. ACSC hospitalizations accordingly can function as an indirect measure of primary care access. Although significantly higher rates are presumed to reflect problems obtaining access to primary care, not all admissions for these conditions are avoidable.

In 2011/2012, the rate of hospitalization for ACSC was 7.4 per 1,000 Manitoba residents. Northern Health Region and Prairie Mountain Health had significantly higher hospitalization rates for these conditions, with the rate in Northern Health Region being more than 3 times that observed for Manitoba overall.

Alternate Level of Care

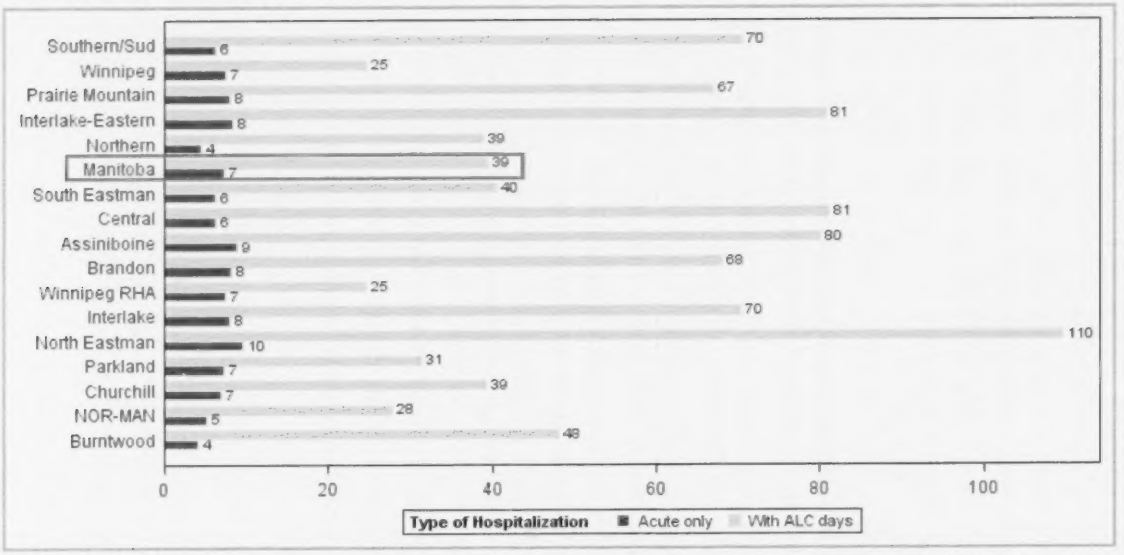


Figure 49: Average length of stay for alternate level of care and acute-only patient stays by RHA of hospital, 2011/2012

Figure 49 shows the average lengths of stay for acute care-only hospitalizations, and for hospitalizations where a portion of the stay included alternate level of care (ALC). Inpatient days are identified as ALC when a patient no longer requires the level of care their care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting, such as a personal care home.

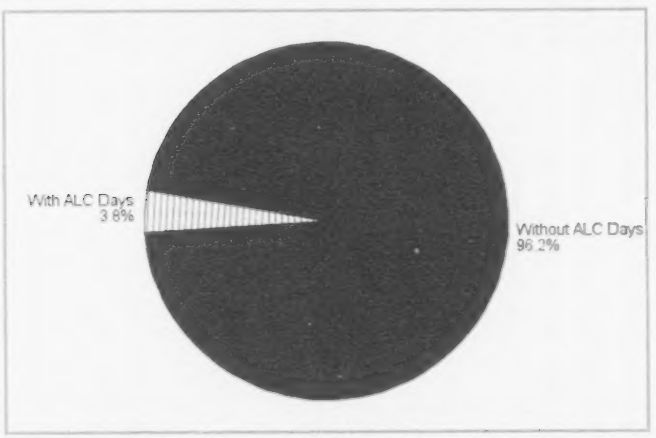


Figure 50: Crude percent of total hospitalized cases associated with and without alternate level of care days, 2011/2012

Figure 50 shows the crude proportion of total hospitalizations with and without associated ALC days. In 2011/2012, there were 5,116 hospitalizations in which a portion of the stay included ALC days, representing 3.8% of all hospitalized cases. The average length of stay for an ALC case was approximately 39 days, compared to 7 days for a non-ALC acute case.

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High Profile Surgeries

The following section provides an overview of high profile surgery rates for the Manitoba population, including rates for coronary artery bypass grafts (CABG), hip replacement surgeries, knee replacement surgeries, cataract surgeries and paediatric dental extractions.

For the period of 2007/2008 to 2011/2012, there were 1.4 coronary artery bypass graft surgeries per 1,000 Manitoba residents age 40 and older.

In 2011/2012, there were 2.2 hip replacement surgeries and 3.5 knee replacement surgeries per 1,000 Manitoba residents age 40 and older.

In 2010/2011, there were 28.0 cataract surgeries per 1,000 Manitoba residents age 50 and older.

There were 14.8 dental surgeries per 1,000 children under the age of six in 2011/2012.

Coronary Artery Bypass Graft Surgery

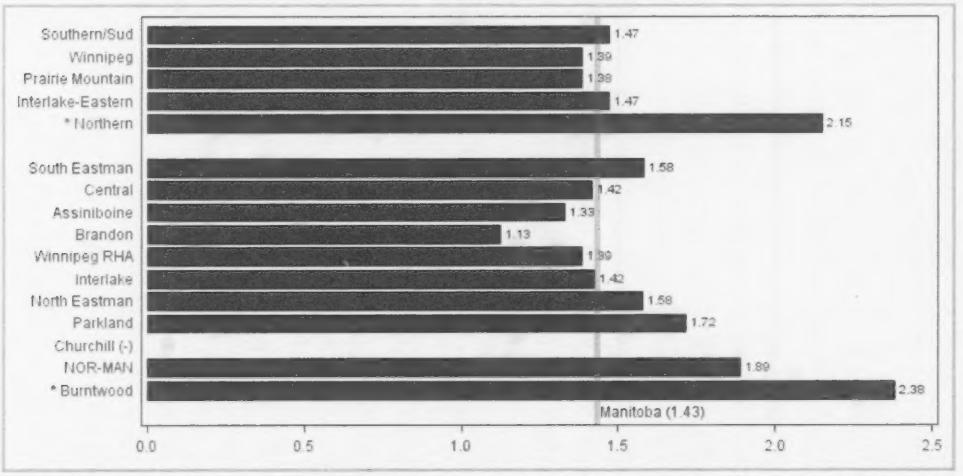


Figure 51: Age- and sex-adjusted coronary artery bypass graft surgery rate per 1,000 residents age 40 and older by RHA, 2007/2008 to 2011/2012

Figure 51 shows the age- and sex-adjusted coronary artery bypass graft (CABG) surgery rate among Manitoba residents age 40 and older, by RHA of residence.

For the period of 2007/2008 to 2011/2012, an average of 822 coronary artery bypass surgeries were performed on Manitoba residents per year, representing a rate of 1.4 surgeries per 1,000 for those age 40 and older. The age- and sex-adjusted rate in Northern Health Region was significantly higher than Manitoba overall.

Hip Replacement

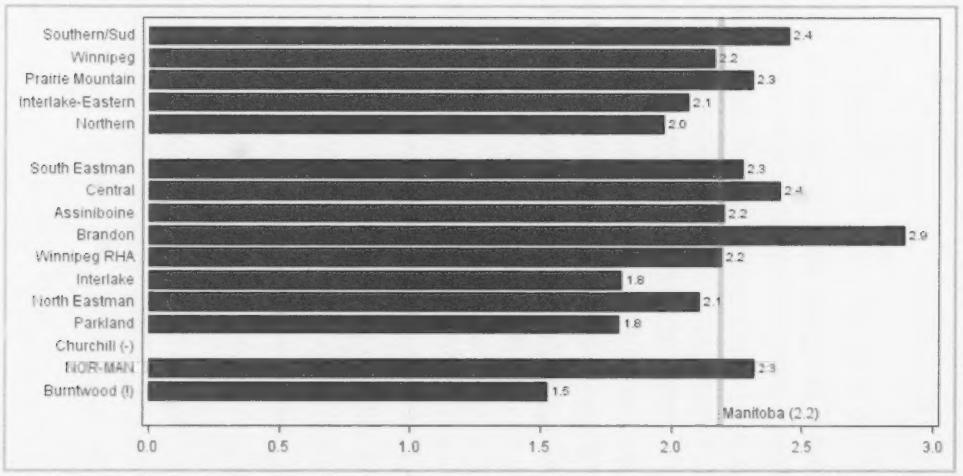


Figure 52: Age- and sex-adjusted hip replacement surgery rate per 1,000 residents age 40 and older by RHA, 2011/2012

Figure 52 shows the age- and sex-adjusted hip replacement surgery rate among Manitoba residents age 40 and older, by RHA of residence.

In 2011/2012, there were 1,291 hip replacement surgeries performed on Manitoba residents, representing a rate of 2.2 per 1,000 for those age 40 and older.

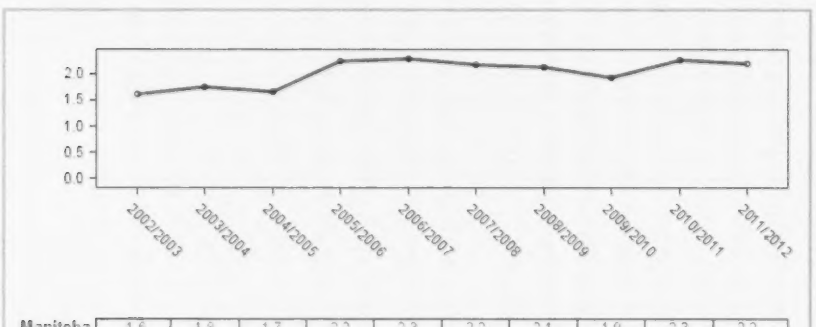


Figure 53: Hip replacement surgery rate per 1,000 residents age 40 and older by fiscal year

Figure 53 shows the hip replacement surgery rate in Manitoba over time. The hip replacement surgery rate in Manitoba increased from 1.6 in 2002/2003 to 2.2 in 2011/2012, but has been relatively stable since 2005/2006.

Knee Replacement

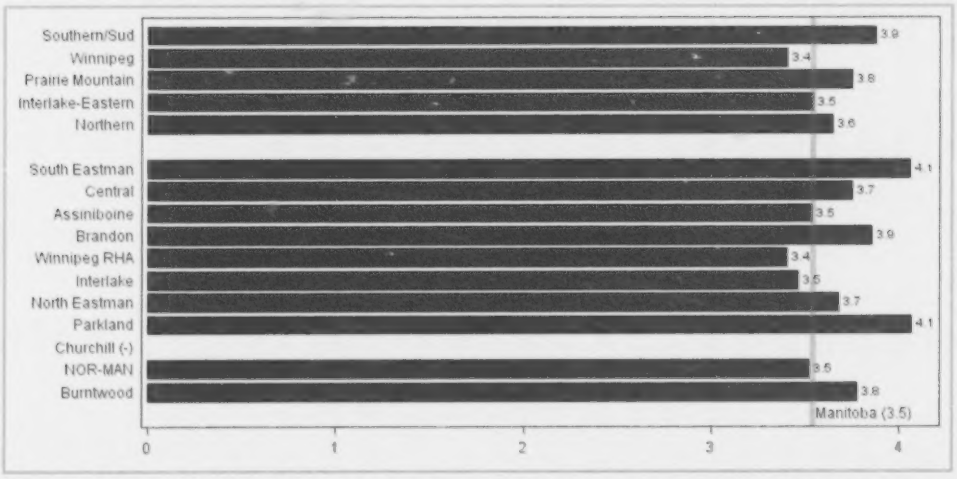


Figure 54: Age- and sex-adjusted knee replacement surgery rate per 1,000 residents age 40 and older by RHA, 2011/2012

Figure 54 shows the age- and sex-adjusted total knee replacement surgery rate among Manitoba residents age 40 and older, by RHA of residence.

In 2011/2012, there were 2,090 total knee replacement surgeries performed on Manitoba residents, representing a rate of 3.5 per 1,000 for those age 40 and older. None of the age- and sex-adjusted rates by new RHA were significantly different than Manitoba overall.

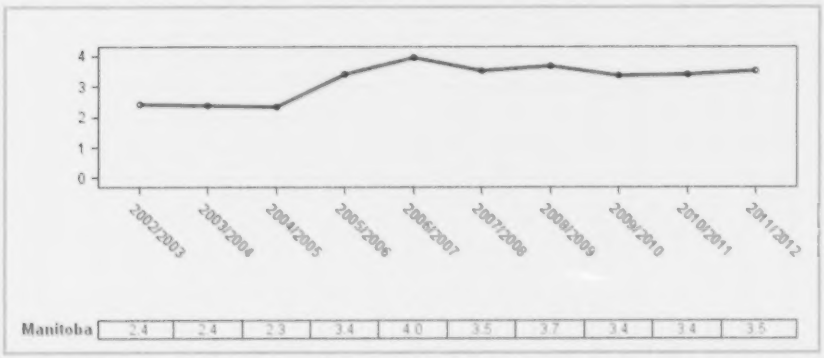


Figure 55: Knee replacement surgery rate per 1,000 residents age 40 and older by fiscal year

Figure 55 shows knee replacement surgery rate in Manitoba over time. The knee replacement surgery rate in Manitoba appeared to have increased from 2.4 in 2002/2003 to 3.5 in 2011/2012, but has been relatively stable since 2005/2006.

Paediatric Dental Extraction

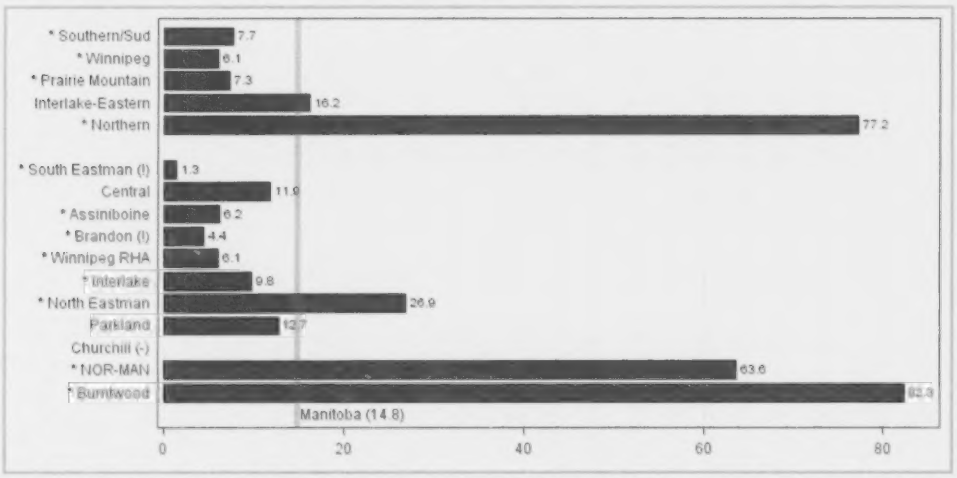


Figure 56: Age- and sex-adjusted rate of dental extraction for children under the age of six per 1,000 children under the age of six by RHA, 2011/2012

Figure 56 shows the age- and sex-adjusted rate of dental extractions among Manitoba children under the age of six by RHA of residence.

In 2011/2012, there were 1,425 hospitalizations for dental extractions among Manitoba children under the age of six, representing a rate of 14.8 hospitalizations per 1,000 children. The age- and sex-adjusted hospitalization rate in Northern Health Region was significantly higher than Manitoba overall, with Northern Health Region having a hospitalization rate 5 times that of the rate in Manitoba.

Cataract Surgery

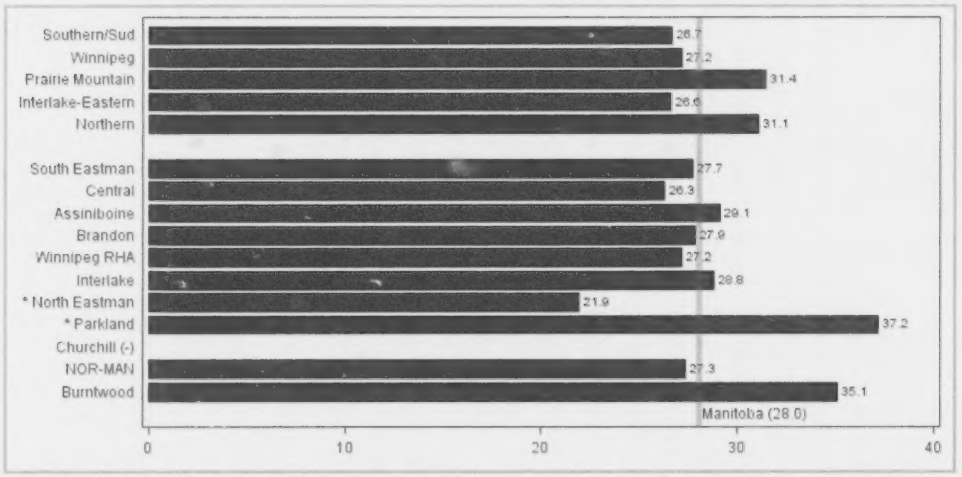


Figure 57: Age- and sex-adjusted rate of cataract surgery per 1,000 residents age 50 and older by RHA, 2010/2011

Figure 57 shows the age- and sex-adjusted rate for cataract surgery among Manitoba residents age 50 and older by RHA of residence.

In 2010/2011, there were 10,825 cataract surgeries performed on Manitoba residents, representing a rate of 28.0 residents per 1,000 for those age 50 and older. None of the age- and sex- adjusted rates by new RHA were significantly different than Manitoba overall.

Women's Reproductive Health

The following section provides an overview of selected women's reproductive health indicators, including hysterectomy rates, proportion of deliveries by caesarean section and proportion of vaginal births after caesarean sections.

In 2011/2012, of every 1,000 Manitoba women between the ages of 20 to 84 approximately 4 had a hysterectomy. Provincially, 21.5% of total deliveries were caesarean deliveries among women between the ages of 15 to 54, and 32.1% of women having a previous caesarean section delivered vaginally.

Hysterectomy

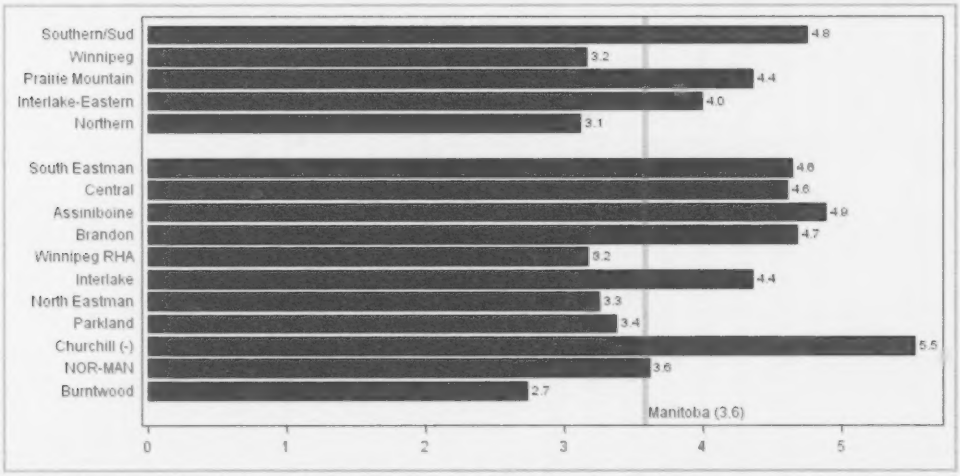
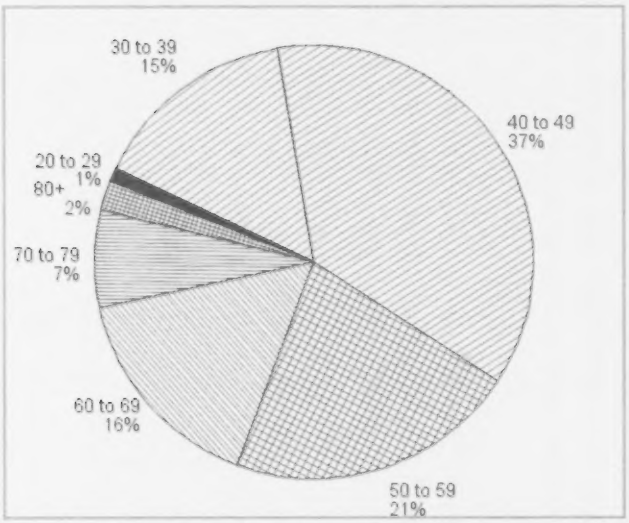


Figure 58: Age-adjusted hysterectomy rate per 1,000 female residents ages 20 to 84 by RHA, 2011/2012

Figure 58 shows the age-adjusted hysterectomy rate among Manitoba female residents ages 20 to 84 by RHA of residence.

In 2011/2012, there were 1,696 females that had a hysterectomy, representing a rate of 3.6 hysterectomies per 1,000 female population ages 20 to 84. None of the age-adjusted rates by new RHA were significantly different than Manitoba overall.



In Manitoba overall, the largest proportion (37%) of hysterectomies were performed on females between the ages of 40 to 49 (Figure 59).

Figure 59: Hysterectomies performed by age group, 2011/2012

Caesarean Section

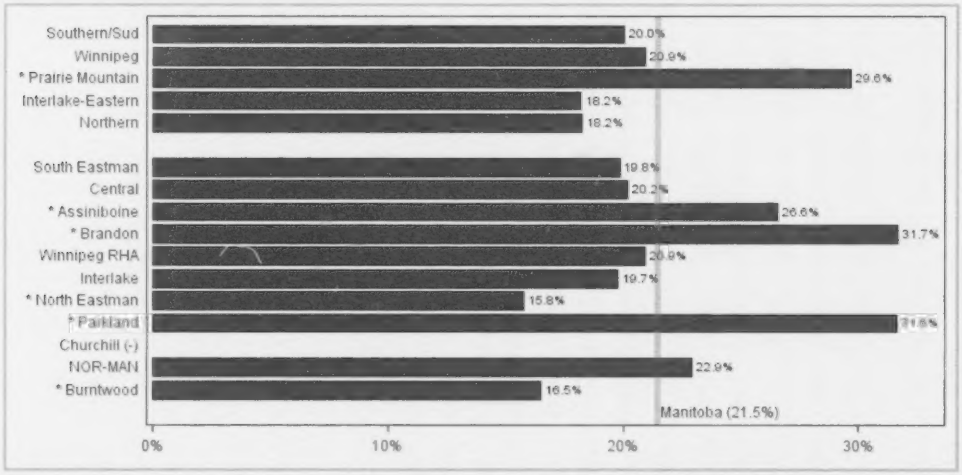


Figure 60: Age-adjusted percent of caesarean sections for females delivering ages 15 to 54 by RHA, 2011/2012

Figure 60 shows the age-adjusted percentage of caesarean sections among total deliveries by Manitoba females ages 15 to 54, by RHA of residence.

In 2011/2012, there were a total of 3,301 caesarean sections among Manitoba females ages 15 to 54, representing 21.5% of total deliveries for females in the same age group.

Prairie Mountain Health had a significantly higher age-adjusted percentage of caesarean sections when compared to Manitoba overall.

Vaginal Birth after Caesarean Section

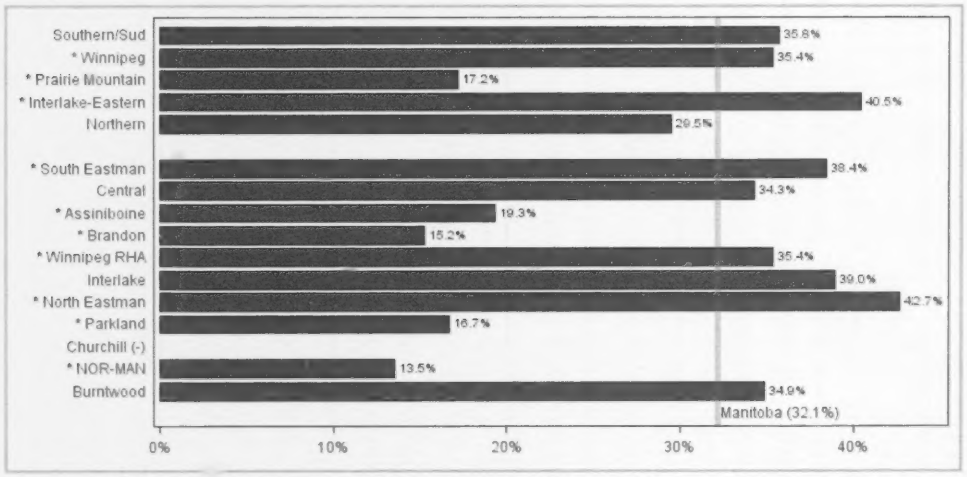


Figure 61: Age-adjusted percent of vaginal births after caesarean sections for females delivering ages 15 to 54 by RHA, 2007/2008 to 2011/20112

Figure 61 shows the age-adjusted percent of vaginal births among Manitoba females ages 15 to 54 who previously had a caesarean section, by RHA of residence.

On average, there were 549 vaginal births after caesarean sections by Manitoba females ages 15 to 54 each year for the period of 2007/2008 to 2011/2012. This represented 32.1% of females who previously had a caesarean section and delivered vaginally in the same age group.

Use of Home Care Services

The following section provides an overview of the home care program in Manitoba. The home care program has the responsibility for the development and implementation of a comprehensive range of in-home services. The program also maintains and manages the assessment and waiting list for personal care home placement in each regional health authority.

This section includes statistics on the average number of clients receiving co-ordinated care and the average number of clients receiving services and assessments for admission to the home care program.

In 2011/2012, an average of 24,173 clients received home care services each month. A majority of clients received services from a home care attendant in any given month, while approximately one-fifth of clients received services from a registered nurse.

In 2011/2012, there were 17,590 Manitoba residents assessed for admission to home care. During this time period, 15,962 were admitted, while 14,795 were discharged. Of those that were assessed, 90.7% were admitted for home care services; the remainder were either ineligible or not admitted due to other reasons.

Average Monthly Number of Clients Receiving Coordinated Home Care Services by RHA

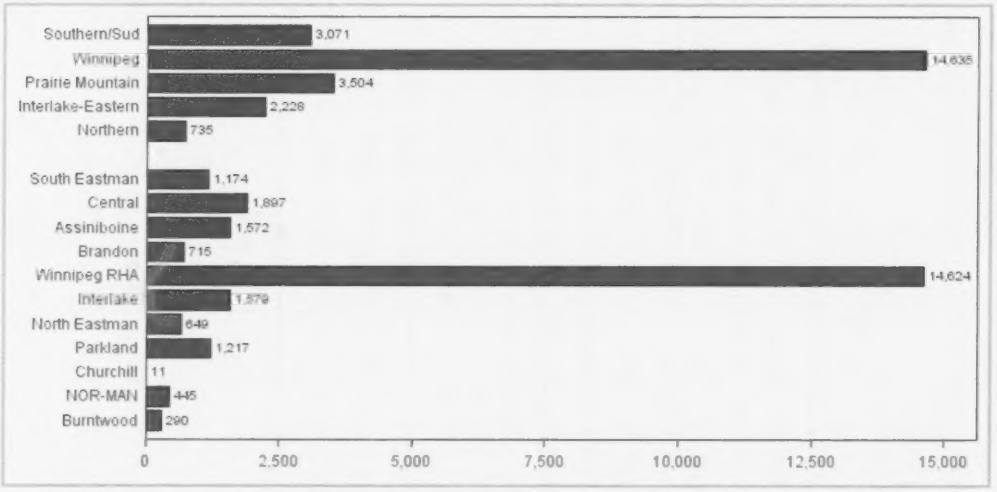


Figure 62: Average monthly number of clients receiving coordinated home care services by RHA, 2011/2012

Figure 62 shows the average monthly number of clients receiving coordinated home care services by RHA of residence.

In 2011/2012, there was an average of 24,173 clients receiving home care services each month. Of these, nearly two-thirds (61%) of clients resided in Winnipeg Health Region.

*Please note that due to a change in methodology, home care statistics in this year's report may not be directly comparable to those from prior years.

Average Monthly Number of Clients Receiving Selected Services by Category

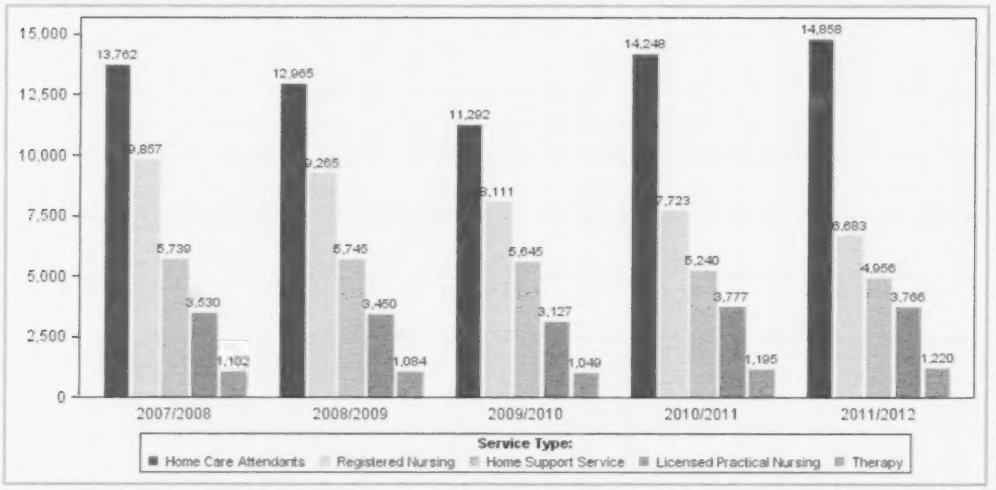


Figure 63: Average monthly number of clients receiving selected services by category, 2007/2008 to 2011/2012

Figure 63 shows the average monthly number of persons receiving selected services by category. (Note that some clients may be receiving services in multiple categories.)

In 2011/2012, the largest proportion of home care clients were provided services by a home care attendant, followed by a registered nurse.

Number of Assessments for Admission, Admissions and Discharges

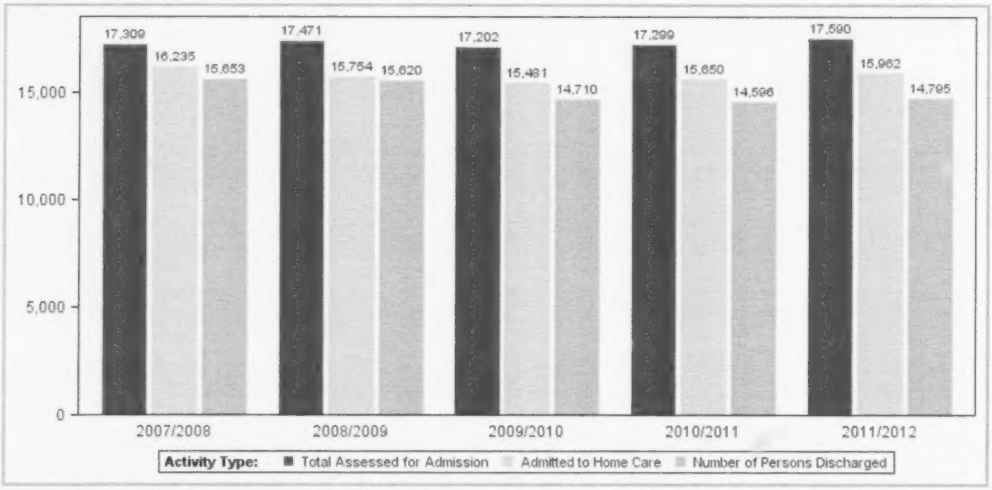


Figure 64: Number of assessments for admission, admissions and discharges, 2007/2008 to 2011/2012

Figure 64 shows the number of assessments for admission to the home care program, as well as admissions to and discharges from the home care program.

In 2011/2012, there were 17,590 Manitoba residents assessed for admission. During this time period, 15,962 clients were admitted and 14,795 clients were discharged. Of those that were assessed, 90.7% were admitted for home care services; the remainder were either ineligible, or not admitted due to other reasons.

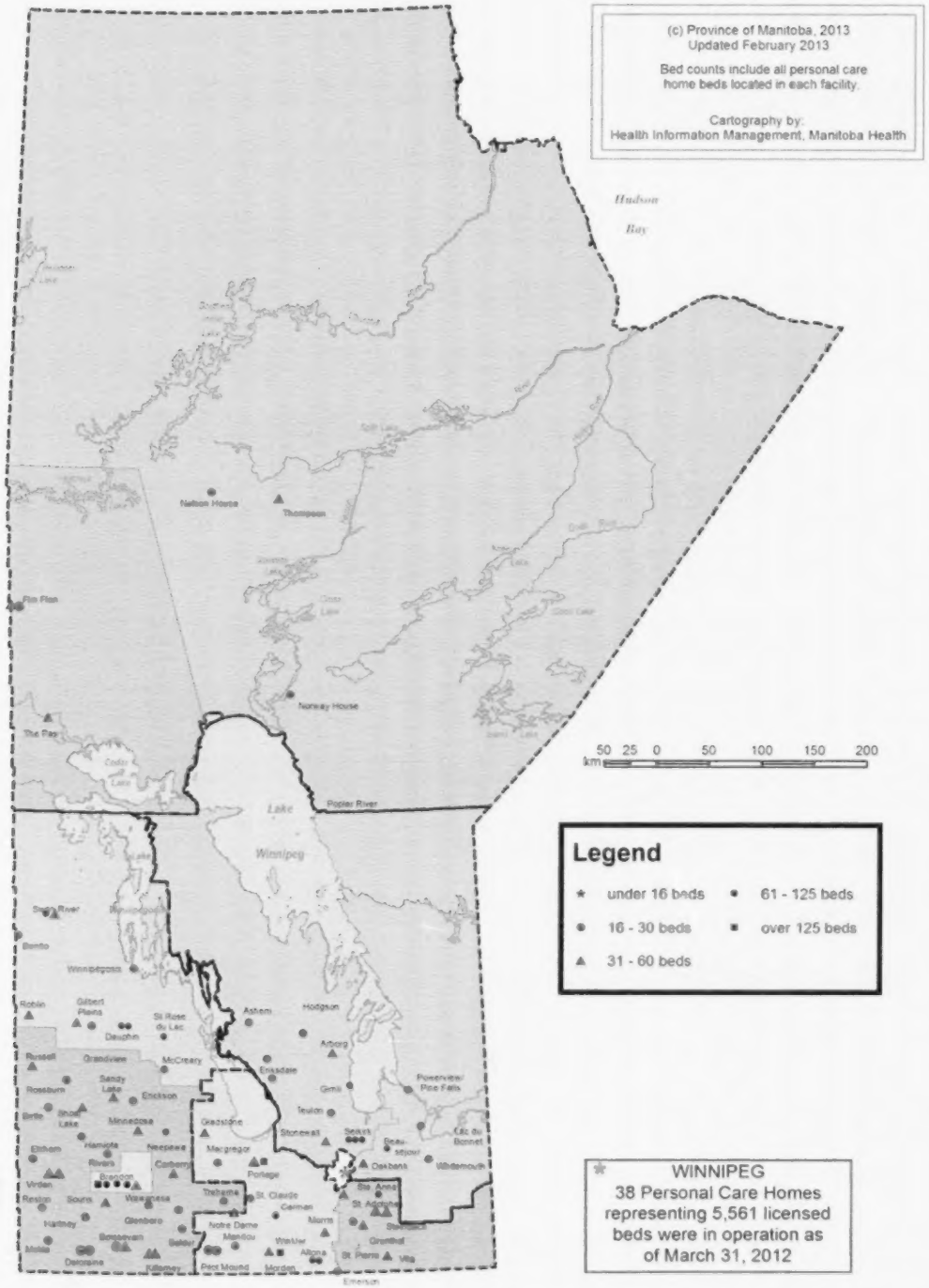
Use of Personal Care Homes

The following section provides an overview of personal care home (PCH) and respite care in Manitoba. This includes PCH admissions, median wait time for admission, and median length of stay.

PCHs are residential facilities which are predominately intended for adults age 75 and older that may have a chronic condition, and for residents with a disability. In 2011/2012, there were 125 PCHs in Manitoba.

In Manitoba, 3% of the population age 75 and older were admitted to a PCH from 2010/2011 to 2011/2012. The median wait time for placement into a PCH was approximately 10 weeks, and the median length of time a resident spent in PCH was approximately two years. Length of stay is associated with level of care on admission, as sicker patients stay in a PCH half the amount of time that healthier patients do.

Map of Personal Care Homes by Facility Size



Personal Care Home Admissions

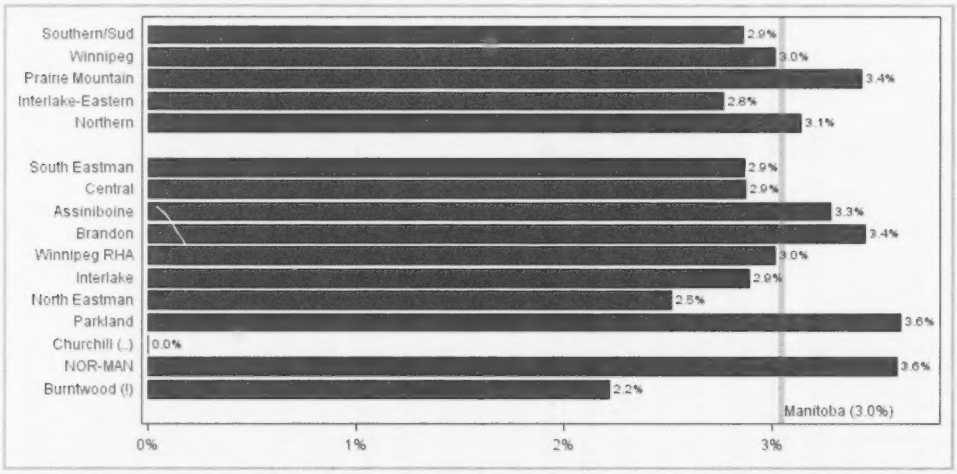


Figure 65: Age- and sex-adjusted percent of residents age 75 and older admitted to a personal care home by RHA, 2010/2011 to 2011/2012

Figure 65 shows the age- and sex-adjusted proportion of Manitoba residents age 75 and older admitted for the first time to a personal care home.

On average, there were 2,568 Manitoba residents age 75 and older admitted to a personal care home each year for the period of 2010/2011 to 2011/2012. This represented 3% of the Manitoba population of the same age group. None of the age-and sex-adjusted rates by new RHA were significantly different than Manitoba overall.

Median Wait Times for Personal Care Home Admission

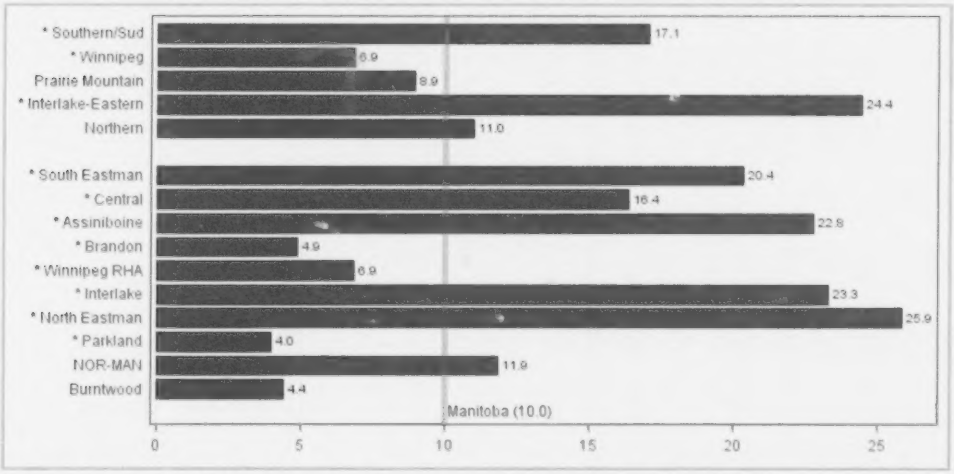


Figure 66: Median wait time (weeks) from assessment to admission of residents age 75 and older by RHA, 2010/2011 to 2011/2012

Figure 66 shows the amount of time it took for half of all Manitoba residents age 75 and older to be admitted after being assessed as requiring placement into a personal care home.

There were a total of 5,135 Manitoba residents age 75 and older admitted to a personal care home in the 2010/2011 to 2011/2012 time period. The median wait time was about 10 weeks. Regionally, the wait time varied. Southern/Santé Sud and Interlake-Eastern RHA had significantly higher wait times, while Winnipeg Health Region had a significantly lower wait time when compared to Manitoba overall.

Median Length of Stay (Years) at Personal Care Homes

	Level of Care			
	All	**1-2**	**3**	**4**
Southern Health/Santé Sud	2.13	2.98	1.95	1.45
Winnipeg Health Region	1.78	2.48	1.50	1.51
Prairie Mountain Health	2.26	2.74	1.84	1.95
Interlake-Eastern RHA	2.13	4.03	1.74	1.79
Northern Health Region	2.05	2.30	1.79	1.72
South Eastman RHA	2.04	2.84	1.45	1.46
Central RHA	2.19	3.19	2.12	1.45
Assiniboine RHA	2.25	2.34	2.03	2.56
Brandon RHA	2.54	2.93	1.70	2.47
Winnipeg RHA	1.78	2.48	1.50	1.51
Interlake RHA	2.15	4.04	1.71	1.43
North Eastman RHA	2.12	4.00	1.77	2.90
Parkland RHA	1.98	5.06	1.79	1.44
NOR-MAN RHA	2.05	2.10	2.19	1.40
Burntwood RHA	2.00	2.70	0.57	2.07
Manitoba	**1.91**	**2.64**	**1.65**	**1.62**

Table 2: Median length of time (years) spent in a personal care home for residents age 75 and older by RHA, 2010/2011 - 2011/2012

Table 2 shows the length of time for which half of all Manitoba residents age 75 and older stayed in a PCH following admission, by level of care at admission.

On average, there were 2,982 Manitoba residents age 75 and older discharged from a personal care home each year for the period of 2010/2011 to 2011/2012.

The overall median length of stay was 1.91 years. Regionally, the length of stay varied from a high of 2.26 years in Prairie Mountain Health to 1.78 years in Winnipeg Health Region. Across levels of care, residents admitted as a level 4 (sicker patients) had a length of stay of 1.62 years compared to those admitted as a level 1 or 2 (healthier patients) who had a length of stay of 2.64 years.

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Preventative Services

The following section provides an overview of preventative and screening services for selected programs available in Manitoba. Detailed information on immunizations have not been included in this report, as they are shown in Manitoba Health's annual Manitoba Immunization Monitoring System (MIMS) report at:

http://www.gov.mb.ca/health/publichealth/surveillance/reports.html#influenza

In Manitoba, breast screening mammograms are provided through the Manitoba Breast Screening Program to check women age 50 and older for early signs of breast cancer. For the period of 2010/2011 to 2011/2012, there were 93,311 Manitoba female residents ages 50 to 69 who had a mammogram, representing 63.4% of the female population in the same age group.

Papanicolaou (Pap) tests are provided to Manitoba females ages 18 to 69 for the early detection of cervical cancer. For the period of 2009/2010 to 2011/2012, there were 249,422 Manitoba females ages 18 to 69 who had a Pap test, representing 60.6% of the female population for the same age group.

Breast Cancer Screening

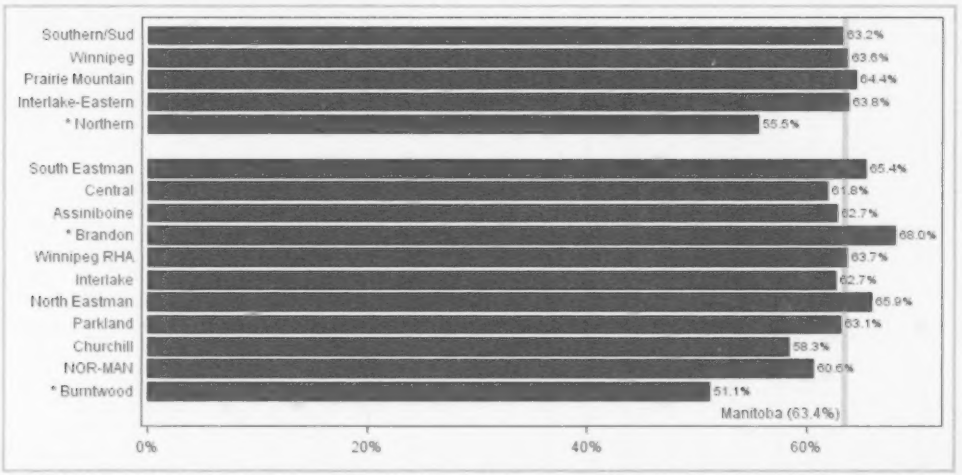

Figure 67: Age-adjusted percent of female residents ages 50 to 69 who received a mammogram by RHA, 2010/2011 to 2011/2012

Figure 67 shows the age-adjusted percent of Manitoba females ages 50 to 69 who received at least one mammogram in a two-year period, by RHA of residence.

For the period of 2010/2011 to 2011/2012, there were 93,311 Manitoba females ages 50 to 69 who had a mammogram, representing 63.4% of the female population for the same age group. The age-adjusted percentage in Northern Health Region was significantly lower than Manitoba overall.

Cervical Cancer Screening

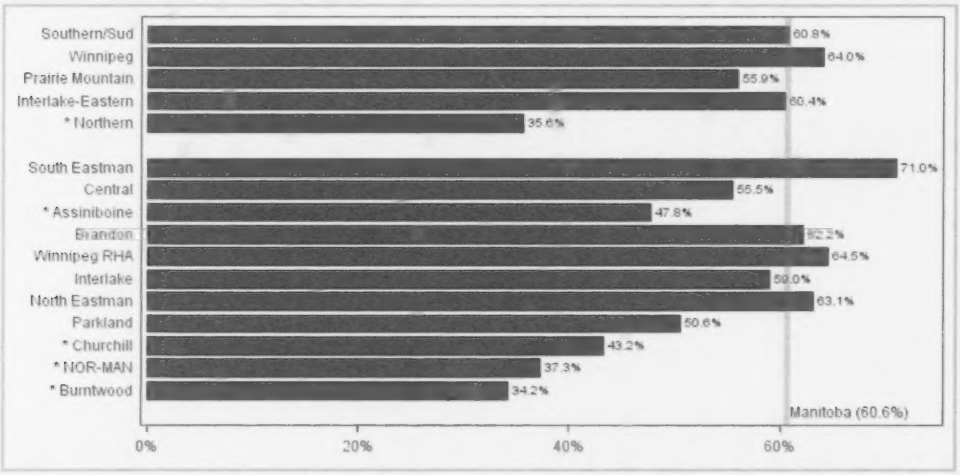

Figure 68: Age-adjusted percent of female residents ages 18 to 69 who received a Pap test by RHA, 2009/2010 to 2011/2012

Figure 68 shows the age-adjusted percent of Manitoba females ages 18 to 69 who received at least one Papanicolauo (Pap) test in a three-year period, by RHA of residence.

For the period of 2009/2010 to 2011/2012, there were 249,422 Manitoba females ages 18 to 69 who had a Pap test, representing 60.6% of the female population in the same age group. The age-adjusted percentage in Northern Health Region was significantly lower than Manitoba overall.

Influenza Immunizations

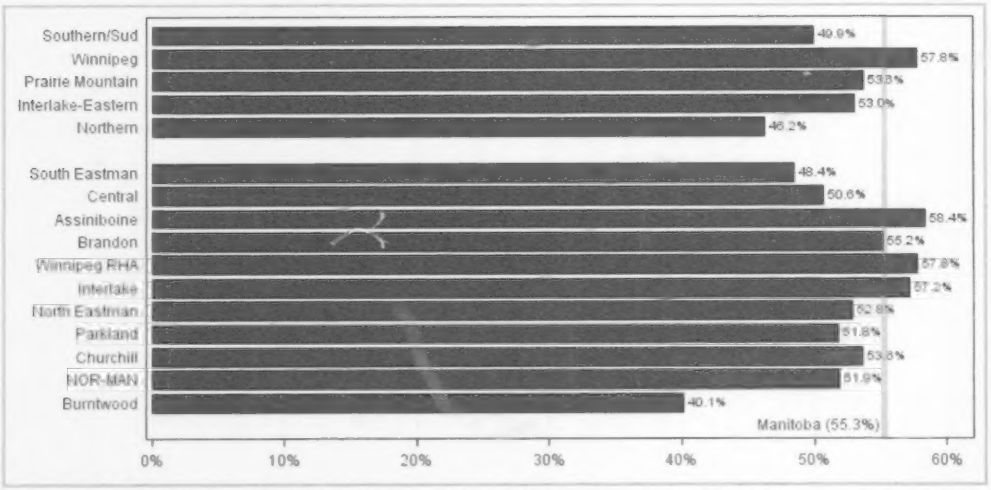

Figure 69: Percent of Manitoba residents age 65 and older immunized for influenza, 2010/2011

Figure 69 shows the crude percentage of Manitobans age 65 and older who were immunized for influenza (flu), by RHA of residence.

In the 2010/2011 'flu season' (September 2010 to April 2011), the percentage of Manitobans age 65 and older who received an immunization for influenza was 55.3%.

For more information on immunizations in Manitoba please follow the link below.

http://www.gov.mb.ca/health/publichealth/surveillance/reports.html#influenza

Pneumococcal Immunizations

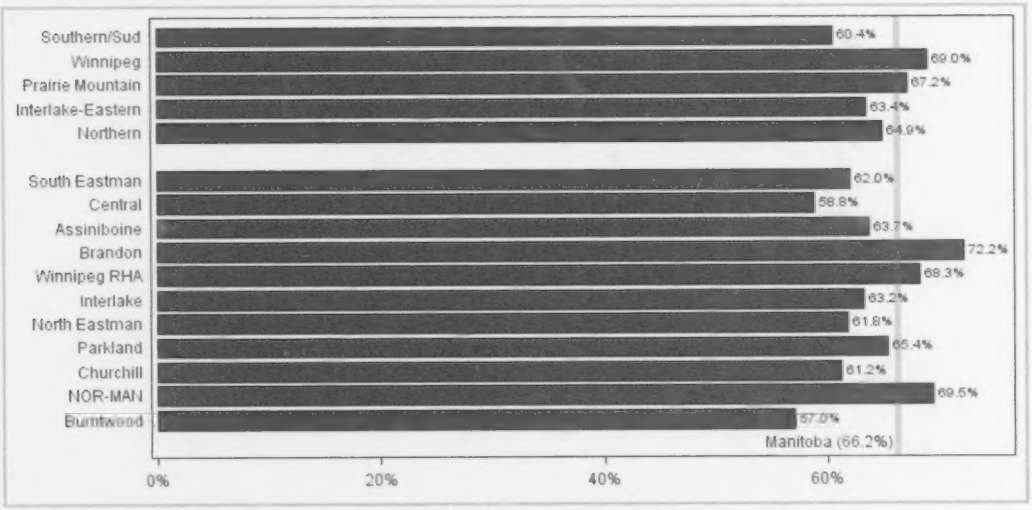

Figure 70: Percent of Manitoba residents age 65 and older immunized for pneumonia, 2010

Figure 70 shows the crude percentage of Manitobans age 65 and older who, by RHA of residence, had a current pneumoccal vaccine.

In 2010, the percentage of Manitobans age 65 and older who had a current pneumoccal vaccine was 66.2%.

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Prescription Drug Use

The following section provides an overview of prescription drug use and paid expenditures by drug benefit plan in Manitoba.

In 2011/2012, 68.2% of Manitoba residents had at least one prescription dispensed. On average, these residents were prescribed 3 different types of drugs in the fiscal year.

Manitoba paid $247 million in drug expenditures for eligible Manitobans through the Pharmacare program, $59.6 million through Family Services, $14.4 million through nursing home care and $3.3 million through palliative care.

Pharmaceutical Use

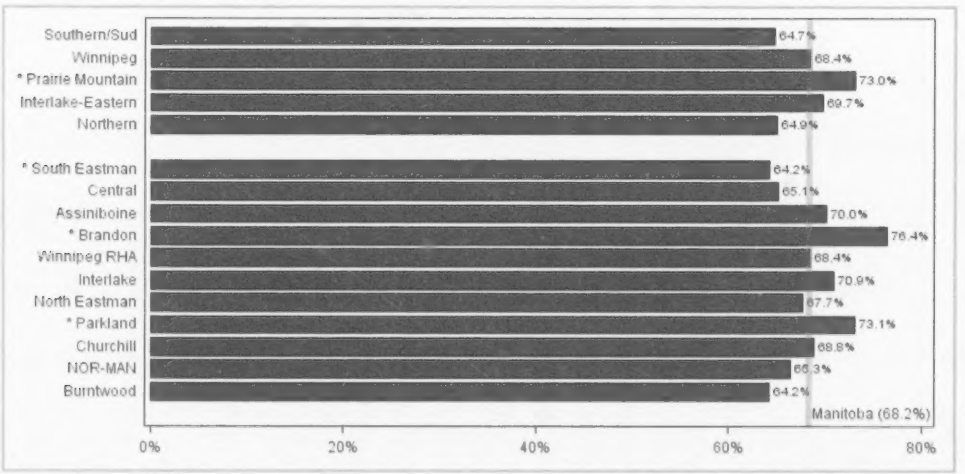


Figure 71: Age- and sex-adjusted percent of residents who had at least one prescription dispensed by RHA, 2011/2012

Figure 71 shows the age- and sex-adjusted percent of Manitoba residents who had at least one prescription dispensed in 2011/2012, by RHA of residence.

In 2011/2012, about 68% of Manitoba residents had at least one prescription dispensed. The age- and sex-adjusted percentage for Prairie Mountain Health was significantly higher than Manitoba overall.

Drugs Dispensed per User

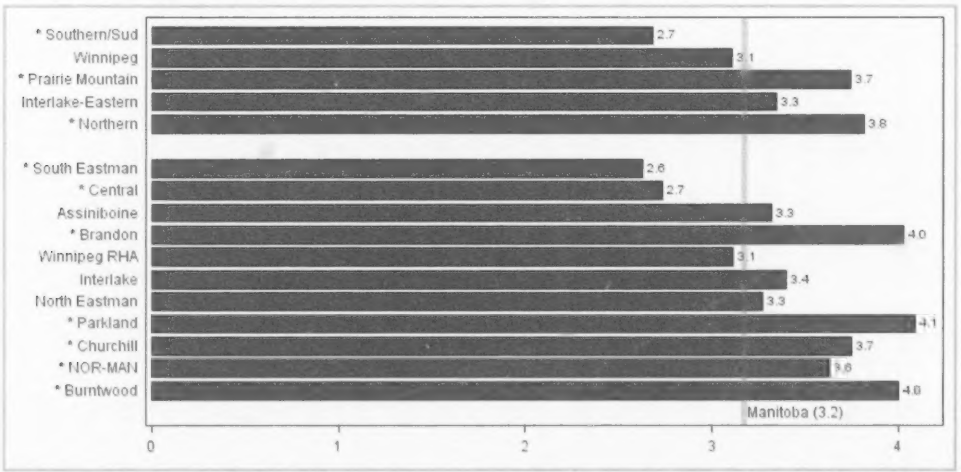


Figure 72: Age- and sex-adjusted average number of drug types dispensed per resident by RHA, 2011/2012

Figure 72 shows the age- and sex-adjusted average number of drug types dispensed per Manitoba resident, by RHA of residence.

In 2011/2012, an average of 3.2 drug types were dispensed per Manitoba resident. The age - and sex-adjusted number varied significantly across the province, ranging from 2.7 drug types per Southern Health/Santé Sud resident to 3.8 drug types per Northern Health Region resident.

Total Drug Expenditures by Plan and RHA

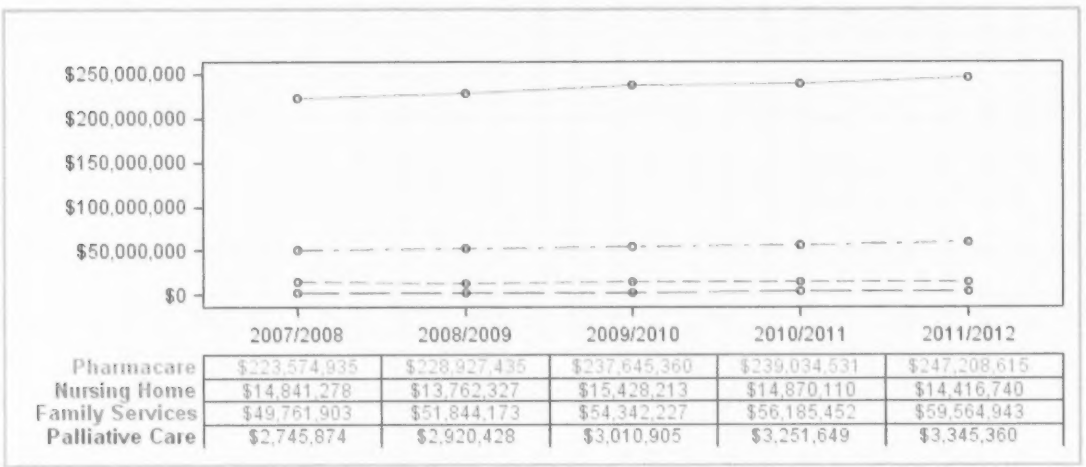
RHA	Pharmacare	Nursing Home	Family Services	Palliative Care
Southern/Sud	$32,319,741	$866,085	$4,469,409	$455,311
Winnipeg	$143,781,139	$8,349,693	$44,161,794	$1,419,907
Prairie Mountain	$41,616,934	$3,647,632	$7,087,378	$1,046,755
Interlake-Eastern	$25,718,331	$1,384,778	$2,887,229	$390,359
Northern	$3,772,471	$168,551	$959,134	$33,027
South Eastman	$12,525,932	$656,217	$1,690,017	$150,459
Central	$19,793,809	$209,868	$2,779,392	$304,853
Assiniboine	$18,266,086	$1,473,165	$1,526,237	$614,908
Brandon	$10,090,480	$1,449,837	$2,903,464	$160,299
Winnipeg RHA	$143,661,701	$8,349,693	$44,143,874	$1,419,907
Interlake	$18,465,755	$971,545	$2,235,807	$280,833
North Eastman	$7,252,576	$413,233	$651,422	$109,526
Parkland	$13,260,368	$724,629	$2,657,677	$271,548
Churchill	$119,437		$17,920	
NOR-MAN	$2,507,022	$166,409	$579,622	$18,284
Burntwood	$1,265,449	$2,142	$379,512	$14,743
Manitoba	**$247,208,615**	**$14,416,740**	**$59,564,943**	**$3,345,360**

Table 3: Total paid drug expenditures by plan and RHA, 2011/2012

Table 3 shows the total paid expenditures by drug benefit plan and by RHA of residence.

In 2011/2012, Manitoba paid $247 million in drug expenditures for eligible Manitoba residents through the Pharmacare program, $59.6 million through Family Services, $14.4 million for those in Nursing Homes and $3.3 million for those in palliative care.

Figure 73 shows the total paid expenditures by drug benefit plan for Manitoba over time. The total expenditures by plan increased from 2007/2008 to 2011/2012, with Pharmacare representing the largest proportion (76%) of expenditures.



	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Pharmacare	$223,574,935	$228,927,435	$237,645,360	$239,034,531	$247,208,615
Nursing Home	$14,841,278	$13,762,327	$15,428,213	$14,870,110	$14,416,740
Family Services	$49,761,903	$51,844,173	$54,342,227	$56,185,452	$59,564,943
Palliative Care	$2,745,874	$2,920,428	$3,010,905	$3,251,649	$3,345,360

Figure 73: Total paid expenditures by fiscal year

Glossary

The Glossary provides explanations and definitions for the indicators and key terms used in this report. The method used to calculate each indicator is described in this section.

Acute Myocardial Infarction (Heart Attack) Rate

Calculated as the number of hospitalizations or deaths due to acute myocardial infarction (AMI) in 2010/2011 in residents age 40 or older per 1,000 residents age 40 or older. The denominator was residents age 40 or older as of June 1, 2010. Rates were age- and sex-adjusted to the Manitoba population age 40 or older. AMI is defined by ICD-9-CM code 410 or ICD-10-CA code I21 in the most responsible diagnosis field for hospitalization or as the cause of death in Vital Statistics death files. Persons discharged alive from hospital after less than three days were excluded as likely 'rule-out' AMI cases.

Adjusted Rate

A statistical process that makes groups such as those in particular geographic areas comparable by removing the effects of demographic differences such as age and sex distribution. Essentially, adjusted rates tell us what the rates would be if each geographic area had the same age and sex distribution. Therefore, adjusted rates are fictional rates which use statistical models to remove the effects of age and sex differences and to allow for comparisons across populations.

Accordingly, while adjusted rates have been statistically modelled to be comparable to each other, they should be considered fictional in the sense that they do not measure anything directly. Please note that these adjusted rates cannot be compared to other rates which have not received the same adjustment.

Alternate Level of Care (ALC)

Inpatient hospital days are identified as ALC when a patient no longer requires the level of care their acute care setting provides, and where the patient is awaiting discharge to a more appropriate non-acute care setting, such as personal care home placement.

The average lengths of stay for acute care hospitalizations, and for hospitalizations where a portion of the stay included ALC were calculated for 2011/2012.

Ambulatory Care Visit Rate

The average number of visits to physicians per resident in 2011/2012. The denominator was all residents as of June 1, 2011. The number was age- and sex-adjusted to the Manitoba population.

The term 'ambulatory visits' captures virtually all contacts with physicians, except during inpatient hospitalization and visits for prenatal care. Ambulatory visits include regular office visits, walk-in clinics, home visits, nursing home visits, visits to outpatient departments of hospitals, and emergency room visits (where data are recorded).

Birth Rate

Calculated as the number of live births in 2010/2011 per 1,000 residents. The denominator was all residents as of June 1, 2010. The Vital Statistics birth records were used to count live births.

Breast Cancer Screening Rate

The proportion of female residents ages 50 to 69 that had at least one mammogram in a two-year period between 2010/2011 and 2011/2012. The denominator was all female residents ages 50 to 69 as of June 1, 2011. The proportion was age- adjusted to the Manitoba female population ages 50 to 69. The indicator includes both screening and diagnostic mammograms, identified by the following tariffs in the physician claims:

- 7098 (Radiology, Intraluminal Dilatation, Mammography, Bilateral)
- 7099 (Radiology, Intraluminal Dilatation, Mammography, Unilateral)
- 7104 (Screening Mammography Bilateral)

Cataract Surgery Rate

The number of cataract replacement surgeries performed on residents age 50 or older, per 1,000 residents age 50 or older in 2010/2011. The denominator was residents age 50 or older as of June 1, 2010. The rate was age- and sex-adjusted to the Manitoba population age 50 or older. Cataract surgery was defined by a physician claim with tariff codes 5611, 5612 and tariff prefix 2 (surgery), or a hospital separation with ICD-9-CM procedure codes 13.11, 13.19, 13.2, 13.3, 13.41, 13.42, 13.43, 13.51, 13.59, or CCI code 1.CL.89. Additional cataract surgeries for Manitoba residents were added from medical reciprocal claims for out of province procedures, including Alberta (tariff code 27.72) and Saskatchewan (tariff codes 135S, 136S, 226S and 325S). The most recent medical reciprocal claims data available is for the 2010/2011 fiscal year; therefore 2010/2011 cataract surgery rates are provided.

Caesarean Section Rate

The proportion of caesarean section procedures among female residents ages 15 to 54 delivering in 2011/2012. The denominator was total deliveries among female residents ages 15 to 54 at hospital admission. The rate was age-adjusted to the Manitoba female population ages 15 to 54 delivering in 2011/2012. Caesarean section procedures were defined by ICD-9-CM procedure codes 74.0, 74.1, 74.2, 74.9 or CCI code 5.MD.60 in any procedure field in hospital abstracts.

Cervical Cancer Screening Rate

The proportion of female residents ages 18 to 69 that received at least one Papanicolaou (Pap) test in a three-year period between 2009/2010 to 2011/2012. The denominator was all female residents ages 18 to 69 on June 1, 2010. The proportion was age-adjusted to the Manitoba female population ages 18 to 69. The indicator is defined by a physician visit with a tariff code for a Pap test, including a visit for a physical or regional exam with a Pap test, or a visit for Pap testing only. The tariffs used were as follows:

- 8470 – Regional gynaecological exam, including cytological smear of the cervix, provided by a GP/FP

- 8495 – complete physical and gynaecological exam, including cytological smear of the cervix, provided by an OB/GYN specialist
- 8496 – regional gynaecological exam, including cytological smear of the cervix, provided by an OB/GYN specialist
- 8498 – complete physical and gynaecological exam, including cytological smear of the cervix, provided by a GP/FP
- 9795 – cytological smear of the cervix for cancer screening

Child Mortality Rate

Calculated as the number of deaths among children ages 1 to 19 years from 2006/2007 to 2010/2011 per 100,000 children ages 1 to 19 years in the same time period. The rates were age- and sex-adjusted to the overall Manitoba population ages 1 to 19 years old. The Vital Statistics death records were used to count deaths. Rates fluctuate in areas with small populations; therefore five years of data was used instead of a single year.

Chronic Conditions Prevalence Rate

The proportion of residents age 20 or older having one or more of the following conditions: arthritis, asthma/COPD, coronary heart disease, diabetes or stroke (see definitions below) in 2011/2012. The denominator was residents age 20 or older with active Manitoba registration on March 31, 2012. The proportion was age- and sex-adjusted to the Manitoba population age 20 or older.

The chronic conditions were defined as follows:

- Arthritis:
    - at least one hospitalization or two physician visits over a five-year period (2007/2008 to 2011/2012) with a diagnosis defined by ICD-9-CM codes 274, 446, 710-721, 725-729, 739 or ICD-10-CM codes M00-M03, M05-M07, M10-M25, M30-M36, M65-M79
- Asthma/COPD:
    - at least one hospitalization or one physician visit over a five-year period (2007/2008 to 2011/2012) with a diagnosis defined by ICD-9-CM code 493 or ICD-10-CM codes J43-J46, or
    - at least one prescription for asthma receiving medication over a five-year period (2007/2008 to 2011/2012) as defined by drug groups R03A (Adrenergics, inhalants), R03B (Other drugs for obstructive airway diseases, inhalants), R03C (Adrenergics for systemic use), R03D (other systemic drugs for obstructive airway diseases)

- Coronary Heart Disease:
    - at least one hospitalization or one physician visit over a five-year period (2007/2008 to 2011/2012) with a diagnosis defined by ICD-9-CM codes 410-414 or ICD-10-CM codes I20-I22, I24-I25
- Diabetes:
    - at least one hospitalization or two physician visits over a three-year period (2009/2010 to 2011/2012) with a diagnosis defined by ICD-9-CM code 250 or ICD-10-CM codes E10-E14, or
    - at least one prescription for diabetes receiving medication over a three-year period (2009/2010 to 2011/2012) as defined by all DINs associated with the following second level ATC code: A10 (drugs used in diabetes)
- Stroke:
    - at least one hospitalization or one physician visit over a five-year period (2007/2008 to 2011/2012) with a diagnosis defined by ICD-9-CM codes 430-438 or ICD-10-CM codes G41, I60-I69

Continuity of Care

The proportion of residents receiving more than 50% of their ambulatory visits over a two-year period (2010/2011 to 2011/2012) from the same physician. The denominator includes all residents with at least three ambulatory visits in the same two-year time period. The proportion was age- and sex-adjusted to the Manitoba population.

For children ages 0 to 14, visits included those to a GP/FP or Pediatrician; for those ages 15 to 59, only GP/FPs were used; for those age 60+, it could be a GP/FP or an Internal Medicine specialist.

Coronary Artery Bypass Graft Surgery Rate

The number of bypass surgeries performed on residents age 40 or older, per 1,000 residents age 40 or older from 2007/2008 to 2011/2012. The denominator was residents age 40 or older during the same time period. The rate was age- and sex-adjusted to the Manitoba population age 40 or older. Bypass surgery was defined by ICD-9-CM procedure codes 36.10-36.16, 36.19 or CCI code 1.IJ.76 in any procedure field in hospital abstracts.

Cumulative Mental Illness Prevalence Rate

The proportion of residents age 10 or older who received treatment for any of the following from 2007/2008 to 2011/2012: depression, anxiety, substance abuse, personality disorders, or schizophrenia. The proportion was age- and sex-adjusted to the Manitoba population age 10 or older. See corresponding glossary entries for definitions on specific mental illnesses.

GLOSSARY

Death Causes

The distribution of causes of death in 2010/2011 based on Vital Statistics files, using the 21 chapters of the International Classification of Diseases (ICD-10-CA) system. Results are provided at the Manitoba level, but not by RHA due to the relatively small number of deaths by cause in smaller areas.

Death Rate

Calculated as the number of deaths in 2010/2011 per 1,000 residents. The denominator was all residents as of June 1, 2010. The rates were age- and sex- adjusted to the overall Manitoba population. The Vital Statistics death records were used to count deaths.

Diabetes Prevalence Rate

The proportion of residents age 1 or older with at least one hospitalization or at least two physician visits with a diagnosis of diabetes within a two-year period (2009/2010 to 2010/2011). A diabetes diagnosis was defined as ICD-9-CM codes 250 or ICD-10-CA codes E10-E14. The denominator was residents age 1 or older as of June 1, 2010. The proportion was age- and sex- adjusted to the Manitoba population age 1 or older.

Although the case definition uses a two-year period to define cases, an annual number was derived by using the earliest date of hospitalization or the later of the two physician claims as the case date. The definition for diabetes was derived from the Canadian Chronic Disease Surveillance System (CCDSS). This definition has been validated and is the definition utilized by Manitoba Health.

Drug Program Expenditures by Plan and RHA

The total paid expenditures by drug benefit plan and RHA of residence is shown for 2011/2012. Drug program expenditures are grouped in to the following categories: Pharmacare, Nursing Home, Family Services and Palliative Care. Expenditure data is taken from DPIN.

Pharmacare is a drug benefit program for eligible Manitoba residents, regardless of disease or age, whose income is seriously affected by high prescription drug costs. Pharmacare coverage is based on both an individual's total family income and the amount they pay for eligible prescription drugs. Each year the individual is required to pay a portion of the cost of the eligible prescription drugs. This amount is the annual Pharmacare deductible. The deductible is set based on the adjusted family income.

Drugs Dispensed per User

The average number of different types of drugs dispensed to each resident who had at least one prescription in 2011/2012. The number was age- and sex-adjusted to the Manitoba population. A 'different' drug type was determined by fourth-level class of the Anatomic, Therapeutic, Chemical (ATC) classification system. This level essentially separates drugs used for different health problems. A person could have several prescriptions for drugs in the same 4th level ATC class, but this would only count as one drug type in the year.

Drugs Programs Information Network (DPIN)

An electronic, on-line, point-of-sale prescription drug database. It links all community pharmacies (but not pharmacies in hospitals or personal care homes) and captures information about all Manitoba residents, including most prescriptions dispensed to registered First Nations. DPIN contains information such as unique patient identification, age, date of birth, sex, medication history, over-the-counter medication history, patient postal code, new drug prescribed, date dispensed, and unique pharmacy identification number. DPIN is maintained by Manitoba Health.

First Nations Residents

Residents who have registered with Manitoba Health as a 'Status or Treaty Indian.' Entitlements of land, voting rights, and Band membership are received by registered First Nations. A registered First Nation resident may be living in a First Nation community (on-reserve) or in a non-First Nation community (off-reserve).

Hip Replacement Rate

The number of total hip replacements performed on residents age 40 or older, per 1,000 residents age 40 or older in 2011/2012. The denominator was all residents age 40 or older as of June 1, 2011. The rate was age- and sex-adjusted to the Manitoba population age 40 or older. Hip replacements were defined by ICD-9-CM codes 81.50, 81.51, or 81.53 or CCI code 1.VA.53.LA-PN or 1.VA.53.PN-PN in any procedure field in hospital abstracts. This definition includes revisions on previously performed hip replacements and excludes partial hip replacements.

Home Care

The Manitoba Home Care Program, established in its present form in 1974, is the oldest comprehensive, province-wide, universal home care program in Canada. Home Care is provided to Manitoba residents of all ages based on assessed need and taking into account other resources available to the individual including family, community resources and other programs. Home Care services are provided free of charge. Reassessments at pre-determined intervals are the basis for decisions by case managers to discharge individuals from the Program or to change the type or amount of services delivered by the Home Care Program.

Home Care: Number of Assessments for Admission, Admissions and Discharges

The overall number of assessments, admission and discharges to Manitoba residents from 2007/2008 to 2011/2012 is shown. Assessments are made by case managers and may or may not lead to an admission in to the Home Care Program.

Home Care: Monthly Number of Clients Receiving Services by Category

The average monthly number of Manitoba residents receiving coordinated Home Care services by category of service from 2007/2008 to 2011/2012 is shown. Home Care services are grouped in to the following services: Home Support Service, Home Care Attendants, Registered Nursing, Licensed Practical Nursing, and Therapy. Note that clients may be receiving services in multiple categories.

GLOSSARY

Home Care: Monthly Number of Clients Receiving Services by RHA

The average monthly number of Manitoba residents receiving coordinated Home Care services by RHA of residence in 2011/2012 is shown.

Hospital Discharge Abstract Database

Hospital abstracts are completed at the point of discharge for all separations from acute care facilities. Abstracts are completed for all inpatient stays as well as some day surgery stays. Since April 1, 2004, they include up to 25 diagnosis codes based on the International Classification of Diseases, 10th Revision, Canada (ICD-10-CA) and 20 procedure (intervention) codes based on the Canadian Classification of Health Interventions (CCI). Information on Manitoba residents who are admitted to out of province acute care facilities is captured through reciprocal Hospital Claims data, housed at Manitoba Health.

Hospital Separation Rate

The total number of inpatient hospital separations of residents, per 1,000 residents in 2011/20112 The denominator was all residents as of June 1, 2011. The rate was age- and sex-adjusted to the Manitoba population.

A separation from a health care facility occurs anytime when a patient leaves because of discharge, transfer or death. In a fiscal year, a resident could be hospitalized more than once, so this indicator shows the total number of separations from acute care facilities.

Hospital Use Rate

The proportion of residents who were admitted to an acute care hospital at least once in 2011/2012. The denominator was all residents as of June 1, 2011. The proportion was age- and sex-adjusted to the Manitoba population.

All inpatient hospitalizations of residents were included regardless of the location of the hospital (both within and outside of Manitoba). Outpatient and day surgery services were excluded.

Hospitalization Rate for Ambulatory Care Sensitive Conditions (ACSC)

The rate at which residents ages 0 to 74 were hospitalized for ambulatory care sensitive conditions, per 1,000 residents ages 0 to 74 in 2011/2012. The denominator was all residents ages 0 to 74 as of June 1, 2011. The rate was age- and sex-adjusted to the Manitoba population ages 0 to 74. All Manitoba hospitals were included; PCHs and Long-Term Care facilities were excluded (Deer Lodge and Riverview). Individuals who died in hospital were excluded from the numerator.

ACSC are a set of conditions comprised of 17 diseases/diagnoses, which have been identified as observably responsive to primary care. ACSC hospitalizations accordingly can function as an indirect measure of primary care access. Although significantly higher rates are presumed to reflect problems obtaining access to primary care, not all admissions for these conditions are avoidable.

ACSC include (with ICD-10-CA and CCI codes):

- Congenital syphilis: Z38 & A50

GLOSSARY

- Immunization-related & preventable conditions (primary diagnoses): A35, A37, A80, I00, I01
- Hemophilus meningitis for age 1-5 only: G00.0
- Epilepsy: G40, G41
- Convulsions: R56
- Severe ENT infections: procedure code 1.DF.53.JATS and diagnosis code H66, J02, J03, J06, J312
- Pulmonary tuberculosis: A15.0, A15.1, A15.2, A15.3, A15.7, A15.9, A16.0, A16.1, A62, A16.7, A16.9
- Other tuberculosis: A15.4, A15.5, A15.6, A15.8, A16.3, A16.4, A16.5, A16.8, A17, A18, A19
- COPD: J41, J42, J43, J44, J47. There is a new combination code of acute lower respiratory infection for patients with COPD (J44) and J10.0, J11.0, J12, J13, J14, J15, J16, J18, J21, J22
- Acute bronchitis: secondary diagnosis of J41, J42, J43, J44, J47 where J20 is the primary diagnosis
- Bacterial pneumonia: primary diagnosis of J13, J14, J15.3, J15.4, J15.7, J15.9, J16, J18. Exclude cases with secondary diagnosis of sickle cell anemia: D57.0, D57.1, D57.2, and D57.8. Exclude patients < 2 months old
- Asthma: primary diagnosis of J45
- Congestive heart failure:

    i. exclude cases with certain cardiac interventions (all categories):1.HB.53, 1.HB.54, 1.HB.55, 1.HD.53, 1.HD.54, 1.HD.55, 1.HZ.53, 1.HZ.55, 1.HZ.85, 1.IJ.50, 1.IJ.57.GQ, 1.IJ.76

    ii. where the primary diagnosis is: I50, J81

- Hypertension: primary diagnosis of I10.0, I10.1, I11 and exclude cardiac surgery as stated above.
- Angina: exclude cases with any surgical intervention in CCI section 1, 2 or 5. And include primary diagnosis of I20, I23.82, I24.0, I24.8, I24.9

- Cellulitis: incision of skin and subcutaneous tissue intervention. Exclude cases with any surgical intervention except incision of skin and subcutaneous tissue where it is the only listed intervention. Include primary diagnosis of :L03, L04, L08, L44.4, L88, L92.2, L98.0, L98.3

- Diabetes: primary diagnosis of: E10.1, E10.6, E10.7, E10.9, E11.0, E11.1, E11.6, E11.7, E11.9, E13.0, E13.1, E13.6, E13.7, E13.9, E14.0, E14.1, E14.6, E14.7, E14.9

- Hypoglycemia: primary diagnosis of E16.0, E16.1, E16.2

- Gastroenteritis: K52.2, K52.8, K52.9

- Kidney/urinary infection: N10, N11, N12, N13.6, N15.8, N15.9, N16.0-N16.5, N28.83-N28.85, N36.9, N39.0, N39.9

- Dehydration/volume depletion: primary diagnosis of E86

- Iron deficiency anemia: age <= 5 and primary diagnosis of: D50.1, D50.8, D50.9

- Nutritional deficiencies: primary diagnosis of E40, E41, E42, E43, E55.0, E64.3

- Failure to thrive: age < 1 and primary diagnosis of R62

- Pelvic inflammatory disease:

    i. exclude cases with surgical procedure of hysterectomy: 1.RM.87, 1.RM.89, 1.RM.91, 5.CA.89.CK, 5.CA.89.DA, 5.CA.89.GB, 5.CA.89.WJ, 5.CA.89.WK

    ii. primary diagnosis of: N70, N73, N99.4 for females only

- Dental conditions: K02-K06, K08, K09.8, K09.9, K12, K13

Hypertension (High Blood Pressure) Prevalence Rate

The proportion of residents age 20 or older with at least one hospitalization or at least two physician visits with a diagnosis of hypertension within a two-year period (2009/2010 to 2010/2011). A hypertension diagnosis was defined as ICD-9-CM codes 401-405 or ICD-10-CA codes I10-I13, I15. The denominator was residents age 20 or older as of June 1, 2010. The proportion was age- and sex-adjusted to the Manitoba population age 20 or older.

Although the case definition uses a two-year period to define cases, an annual number is derived by using the earliest date of hospitalization or the later of the two physician claims as the case date. The definition for hypertension was derived from the Canadian Chronic Disease Surveillance System (CCDSS). This definition has been validated and is the definition utilized by Manitoba Health.

Hysterectomy Rate

The number of hysterectomy surgeries performed on female residents ages 20 to 84, per 1,000 female residents ages 20 to 84 in 2011/2012. The denominator was female residents ages 20 to 84 as of June 1, 2011. The rate was age-adjusted to the Manitoba female population ages 20 to 84. Hysterectomy surgery was defined by ICD-9-CM procedure codes 68.30 – 68.90 or CCI codes 1.RM.87BAGX, 1.RM.87.CAGX, 1.RM.87.DAGX, 1.RM.87.LAGX, 1.RM.89, 1.RM.91 in any procedure field in hospital abstracts.

Immunization for Influenza (Flu) Rate

The proportion of residents age 65 or older who received a vaccine for the 2010/2011 influenza season (September through April). The denominator was all residents age 65 or older as of September 1, 2010. Flu shots were defined by physician tariff codes 8791, 8792, 8793, or 8799 in Manitoba Immunization Monitoring System (MIMS) data.

Immunization for Pneumonia Rate

The proportion of residents age 65 or older who ever received a vaccine for pneumonia as of 2010. The denominator was all residents age 65 or older as of June 1, 2010. For most seniors, a pneumococcal vaccination is considered a 'once in a lifetime' event, so these rates show the cumulative percent of residents who ever had a pneumococcal vaccination, as defined by physician tariff codes 8681-8694 and 8961 in MIMS data.

Infant Mortality Rate

Calculated as the number of deaths among infants under one year of age from 2006/2007 to 2010/2011 per 1,000 live births in the same time period. The Vital Statistics death records were used to count deaths. Rates fluctuate in areas with small populations; therefore five years of data was used instead of a single year.

Injury Hospitalization Rate

The number of hospital separations of residents for which any injury code was included as one of the diagnoses in hospital abstracts in 2011/2012 per 1,000 residents. The denominator was all residents as of June 1, 2011. Rates were age- and sex-adjusted to the Manitoba population.

Hospitalizations were defined as any inpatient stay with an external cause of injury diagnosis code, ICD-9-CM codes E800-E999; ICD-10-CA codes V01-Y89. Excluded from the hospitalizations due to injury are those related to medical error or complications, as follows:

- misadventures during surgical or medical care, ICD-9-CM codes E870-E876; ICD-10-CA codes Y60-Y69, Y88.1
- reactions or complications due to medical care, ICD-9-CM codes E878-E879; ICD-10-CA codes Y70-Y84, Y88.2, Y88.3

- adverse effects due to drugs, ICD-9-CM codes E930-E949; ICD-10-CA codes Y40-Y59, Y88.0

All Manitoba hospitals were included; PCHs and Long-Term Care facilities were excluded (Riverview, Deer Lodge, Rehabilitation Centre for Children and Adolescent Treatment Centre). Newborn birth injuries or deaths, stillbirths and brain deaths were excluded.

Injury Mortality Causes

The distribution of causes of injury death in 2010/2011 based on Vital Statistics files, using the International Classification of Diseases (ICD-10-CA) system. Excluded are codes for misadventures, reactions, complications, or adverse effects of medical, surgical or pharmaceutical treatments (see list in Injury Mortality Rate). Results are provided at the Manitoba level, but not by RHA due to the relatively small number of deaths by cause in smaller areas.

Injury Mortality Rate

Calculated as the number of deaths due to injury in 2010/2011 per 1,000 residents, based on Vital Statistics death codes. The denominator was all residents as of June 1, 2010. Rates were age- and sex-adjusted to the Manitoba population. Injury deaths were defined as records with ICD-10-CA cause of death codes of V01-Y89.

Excluded from the hospitalizations due to injury are those related to medical error or complications, as follows:

- misadventures during surgical or medical care, ICD-9-CM codes E870-E876; ICD-10-CA codes Y60-Y69, Y88.1
- reactions or complications due to medical care, ICD-9-CM codes E878-E879; ICD-10-CA codes Y70-Y84, Y88.2, Y88.3
- adverse effects due to drugs, ICD-9-CM codes E930-E949; ICD-10-CA codes Y40-Y59, Y88.0

Insured Services per Capita

The total dollars spent on insured services in Manitoba in 2011/2012 per capita. The denominator was the number of residents as of June 1, 2011.

The Health Services Insurance Plan operates outside the Provincial Consolidated Fund and provides for payment of insured services for hospitals, personal care homes, and health care providers on behalf of Manitoba residents. Other plans include the prescription drugs program (Pharmacare), Ambulance, Air Ambulance, and Northern Patients Transportation programs.

Knee Replacement Rate

The number of total knee replacements performed on residents age 40 or older, per 1,000 residents age 40 or older in 2011/2012. The denominator was all residents age 40 or older as of June 1, 2011. The rate was age- and sex-adjusted to the Manitoba population age 40 or older. Knee replacements were defined by ICD-9-CM codes 81.54, 81.55, or CCI code 1.VG.53 in any procedure field in hospital abstracts. This definition includes revisions on previously performed knee replacements.

Location of Hospitalization

Of all hospitalizations of residents, this is the proportion of separations that occurred in a hospital within the RHA, in another RHA, in Winnipeg, or out of province in 2011/2012. If a patient was transferred between hospitals, each stay was counted as a separate event and was attributed to the appropriate location.

Mood and Anxiety Disorders

The proportion of residents age 10 or older diagnosed with depression and/or anxiety disorder from 2007/2008 to 2011/2012, by any of the following:

- one or more hospitalizations with a diagnosis for depressive disorder, affective psychoses, neurotic depression or adjustment reaction: ICD–9–CM codes 296.2–296.8, 300.4, 309 or 311; ICD–10–CA codes F31, F32, F33, F341, F38.0, F38.1, F41.2, F43.1, F43.2, F43.8, F53.0, F93.0 or with a diagnosis for a manic disorder, anxiety state, phobic disorders, obsessive–compulsive disorders or hypochondriasis: ICD–9–CM codes 296.1, 300.0, 300.2, 300.3, 300.7; ICD–10–CA codes F40, F41.0, F41.1, F41.3, F41.8, F41.9, F42

- one or more hospitalizations with a diagnosis for anxiety disorders: ICD–9–CM code 300; ICD –10–CA codes F32, F341, F40, F41, F42, F44, F45.0, F45.1, F45.2, F48, F68.0, or F99 AND one or more prescriptions for an antidepressant, anxiolytic or mood stabilizer: ATC codes N05AN01, N05BA, N06A

- one or more physician visits with a diagnosis for depressive disorder or affective psychoses: ICD–9–CM codes 296, 311

- one or more physician visits with a diagnosis for anxiety disorders: ICD–9–CM code 300 AND one or more prescriptions for an antidepressant, anxiolytic or mood stabilizer: ATC codes N05AN01, N05BA, N06A

- three or more physician visits with a diagnosis for anxiety disorders or adjustment reaction: ICD–9–CM code 300, 309

The proportion was age and sex-adjusted to the Manitoba population age 10 or older.

It was recently decided to measure depression and anxiety disorders in combination, rather than as separate indicators. This change was motivated by work at the Manitoba Centre for Health Policy showing that depressive and anxiety disorders are often difficult to distinguish in administrative data

due to variation in clinical presentations, screening, diagnostic tools, and coding practices—as well as the frequent occurrence of comorbidity of the two conditions. (For a full discussion of these issues, see pages 84-85 of: Brownell M, Chartier M, Santos R, Ekuma O, Au W, Sarkar J, MacWilliam L, Burland E, Koseva I, Guenette W. How Are Manitoba's Children Doing? Winnipeg, MB. Manitoba Centre for Health Policy, October 2012).

Paediatric Dental Extraction Rate

The number of dental extractions among resident children under the age of six, per 1,000 children under the age of six in 2011/2012. The denominator was resident children under the age of six as of June 1, 2011. The rate was sex-adjusted to the Manitoba population under the age of six. Dental extractions were defined by ICD-9-CM codes 23.01, 23.09, 23.11, 23.19 or CCI codes 1.FE.57, 1.FE.89. Paediatric dental extractions performed outside of hospitals (e.g., in dentists' offices) were not included, so the rates reported may underestimate the extent of severe early childhood tooth decay.

Personal Care Homes (PCH)

Personal care homes (PCHs), or nursing homes, are residential facilities for persons with chronic illness or disability who can no longer remain safely at home even with home care services. Residents of PCHs are predominantly older adults. In Manitoba, PCHs can be proprietary (for profit) or non-proprietary. PCH data is populated by assessment, admission and discharge forms. An assessment form for placement in to a PCH is filled out by the resident while in an acute care facility or at home. The assessment application is reviewed to decide if the person is eligible for admission. There may be a waiting period between admission approval and actual admission.

Personal Care Home, Admissions

The percentage of residents age 75 and older admitted to a PCH in a year (values shown are the annual average for 2010/2011 to 2011/2012). Residence was assigned based on the location of the PCH. The denominator was all residents age 75 and older in the same period. The proportion was age- and-sex adjusted to the Manitoba population age 75 and older.

Personal Care Home, Median Length of Stay at Personal Care Homes

1he median length of stay (in years) of PCH residents age 75 and older, for 2010/2011 to 2011/2012, according to their level of care on admission. The median length of stay is the amount of time which half of all residents stayed.

Personal Care Home, Median Wait Time for Admission

The amount of time it took for half of all residents, age 75 and older, to be admitted, after being assessed as requiring PCH placement. The median wait time is provided in weeks and is shown for the two-year time period of 2010/2011 to 2011/2012.

Personality Disorders Prevalence Rate

The proportion of residents age 10 or older diagnosed with personality disorders from 2007/2008 to 2011/2012, by any of the following:

- one or more hospitalizations with a diagnosis for personality disorders, ICD-9-CM code 301; ICD-10-CA codes F34.0, F60, F61, F62, F68.1, F68.8, F69
- one or more physician visits with a diagnosis for personality disorders, ICD-9-CM code 301.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Pharmaceutical Use Rate

The proportion of residents who had at least one prescription dispensed in 2011/2012. The denominator was all residents as of June 1, 2011. The proportion was age- and-sex adjusted to the Manitoba population. This includes all prescriptions dispensed from community-based pharmacies across Manitoba. Prescription data is captured in Manitoba's Drug Programs Information Network (DPIN) (see glossary entry above).

Physician Claims

These are claims for payment submitted to the provincial government by physicians for services they provide. Fee-for-service physicians receive payment based on these claims, while those submitted by salaried physicians are only for administrative purposes (referred to as "shadow billing").

Physician Use Rate

The proportion of residents who received at least one ambulatory visit in 2011/2012. The denominator was all residents as of June 1, 2011. The proportion was age- and sex-adjusted to the Manitoba population.

The term 'ambulatory visits' captures virtually all contacts with physicians, except during inpatient hospitalization. Ambulatory visits include regular office visits, walk-in clinics, home visits, nursing home visits, visits to outpatient departments of hospitals, and emergency room visits (where data are recorded).

Population

Population data shown in this report was based on records of residents registered with Manitoba Health on June 1, 2011. Registered individuals include persons who reside in the province of Manitoba, as well as new Manitobans arriving from another province (eligible for coverage after a waiting period of up to 3 months), new Manitobans from another country (eligible for coverage immediately if they have landed immigrant status), and foreign citizens holding a one-year or more work permit. Manitoba residents not covered include armed forces, RCMP personnel and federal penitentiary inmates.

Population Pyramid

A graph showing the age and sex distribution of a population. The percentage of residents within each five-year age group is shown for both males and females. Most developing countries have a population pyramid triangular in shape, indicating a very young population with few people in the oldest age groups. Most developed countries have a population pyramid that looks more rectangular with the young and middle-aged people representing similar and smaller percentages of the population, and more elderly people in the top part of the pyramid.

Premature Mortality Rate

Calculated as the number of deaths among residents under the age of 75 years from 2006/2007 to 2010/2011 per 1,000 residents under the age of 75 years in the same time period. The rates were age- and sex-adjusted to the overall Manitoba population. The Vital Statistics death records were used to count deaths

Pregnancy Rate

Calculated using data from hospital records by taking the ratio of all live and still births, abortions and ectopic pregnancies for females ages 15 to 49 in 2011/2012 to the female population ages 15 to 49. The denominator was female residents ages 15 to 49 as of June 1, 2011. Rates were age- and sex- adjusted to the Manitoba female population ages 15 to 49.

Pregnancy was defined as follows:

- A hospitalization for one of the following diagnoses:
  - Live birth:
    - ICD10 - Z37, ICD9 – V27
  - Missed Abortion:
    - ICD10 – O02.1, ICD9 - 632
  - Ectopic Pregnancy:
    - ICD10 – O00, ICD9 – 633
  - Abortion (spontaneous or medical):
    - ICD10 – O03, O04, O05, O06, O07
    - ICD9 – 634, 635, 636, 637
  - Intrauterine death:
    - ICD10 – O36.4, ICD9- 656.4

- OR –

- A Hospitalization with one of the following procedures:
  - Surgical Termination of Pregnancy:
    - CCI – 5.CA.89, 5.CA.90, ICD9 - 69.01, 69.51, 74.91
    - Surgical Removal of extra-uterine (ectopic) pregnancy:
      - CCI – 5.CA.93, ICD9 – 66.62, 74.3

- Pharmacological Termination of Pregnancy:
  - CCI – 5.CA.88, ICD9 - 75.0
- Interventions during labour and delivery:
  - CCI – 5.MD.50, 5.MD.60

Regional Health Authority (RHA)

Manitoba's health care system is a broad network of services and programs. Overseeing this system is Manitoba Health, a department of the provincial government. For the most part, the actual services are delivered through local regional health authorities - five regional agencies set up by the province to meet the local needs of Manitobans. As of April of 2012, the RHAs were Winnipeg Health Region, Southern Health/Santé Sud, Interlake-Eastern RHA, Prairie Mountain Health and Northern Health Region.

In Manitoba, the regional health authorities are responsible, within the context of broad provincial policy direction, for assessing and prioritizing needs and health goals, and developing and managing an integrated approach to their own health care system.

The Regional Health Authorities Act legislation came into force in 1997. It sets out the conditions under which the RHAs are incorporated, as well as defining duties and responsibilities of the RHAs and the Minister of Health. Both parties are responsible for policy, assessment of health status and ensuring effective health planning and delivery.

Indicators in this report, unless otherwise indicated, are presented by RHA of residence. In other words, indicators reflect where people live, not where they received services. For this year's report, indicators are presented for both the new and former RHAs.

Schizophrenia Prevalence Rate

The proportion of residents age 10 or older diagnosed with schizophrenia from 2006/2007 to 2011/2012, by any of the following:

- one or more hospitalizations with a diagnosis for schizophrenia, ICD-9-CM code 295; ICD-10-CA codes F20, F21, F23.2, F25
- one or more physician visits with a diagnosis for schizophrenia, ICD-9-CM code 295.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Self-Inflicted Injury Hospitalization Rate

The number of hospital separations of residents age 10 or older for which any self-inflicted injury code was included as one of the diagnoses in 2011/2012 per 1,000 residents age 10 or older. The denominator was residents age 10 or older as of June 1, 2011. Rates were age- and sex-adjusted to the Manitoba population age 10 or older.

Hospitalizations were defined as any inpatient stay with a self-inflicted external cause of injury diagnosis code, ICD-9-CM codes E950-E959; ICD-10-CA codes X60-X84.

Size for Gestational Age

Size for gestational age is a measure of fetal growth. Birth weight and gestational age were taken from the Vital Statistics birth records for 2010/2011. Size for gestational age is classified as follows:

- Small-for-Gestational-Age: Infants that are at or below the 10th percentile in birth weight, from an infant population of the same sex and gestational age.
- Large-for-Gestational-Age: Infants that are at or above the 90th percentile in birth weight, from an infant population of the same sex and gestational age.
- Appropriate-for-Gestational-Age: A birth is considered to be appropriate for gestational age if the birth weight is between the 10th and 90th percentiles for the infant's gestational age and sex.

Stroke Rate

Calculated as the number of hospitalizations or deaths due to stroke in 2010/2011 in residents age 40 or older per 1,000 residents age 40 or older. The denominator was residents age 40 or older as of June 1, 2010. Rates were age- and sex-adjusted to the Manitoba population age 40 or older. Stroke is defined by ICD-9-CM codes 431, 434, 436 or ICD-10-CA codes I61, I63, I64 in the most responsible diagnosis field for hospitalization or as the cause of death in Vital Statistics death files. This definition will not capture minor strokes which did not result in hospitalization or death.

Substance Abuse Prevalence Rate

The proportion of residents age 10 or older diagnosed with substance abuse from 2007/2008 to 2011/2012, by any of the following:

- one or more hospitalizations with a diagnosis for alcoholic or drug psychoses, alcohol or drug dependence or nondependent abuse of drugs, ICD-9-CM code 291, 292, 303, 304, 305; ICD-10-CA codes F10-F19, F55
- one or more physician visits with a diagnosis for alcoholic or drug psychoses, alcohol or drug dependence or nondependent abuse of drugs, ICD-9-CM code 291, 292, 303, 304, 305.

The proportion was age- and sex-adjusted to the Manitoba population age 10 or older.

Suicide Rate

The number of deaths due to suicide among residents age 10 or older from 2006/2007 to 2010/2011 per 1,000 residents. The denominator was residents age 10 or older per year from 2006/2007 to 2010/2011. Rates were age- and sex-adjusted to the Manitoba population age 10 or older. Suicides were defined as any death record in Vital Statistics data with any of the following causes:

- accidental poisoning, ICD-9-CM codes E850-E854, E858, E862, E868; ICD-10-CA codes X40-X42, X46, X47
- poisoning with undetermined intent, ICD-10-CA codes Y10-Y12, Y16, Y17
- self-inflicted poisoning, ICD-9-CM codes E950-E952; ICD-10-CA codes X60-X69
- self-inflicted injury by hanging, strangulation and suffocation, ICD-9-CM code E953; ICD-10-CA code X70
- self-inflicted injury by drowning, ICD-9-CM code E954; ICD-10-CA code X71
- self-inflicted injury by firearms and explosives, ICD-9-CM code E955; ICD-10-CA codes X72-X75
- self-inflicted injury by smoke, fire, flames, steam, hot vapours and hot objects, ICD-9-CM codes E958.1, E958.2; ICD-10-CA codes X76, X77
- self-inflicted injury by cutting or piercing instruments, ICD-9-CM code E956; ICD-10-CA codes X78, X79
- self-inflicted injury by jumping from high places, ICD-9-CM code E957; ICD-10-CA code X80
- self-inflicted injury by jumping or lying before a moving object, ICD-9-CM code E958.0; ICD-10-CA code X81
- self-inflicted injury by crashing a motor vehicle, ICD-9-CM code E958.5; ICD-10-CA code X82
- self-inflicted injury by other and unspecified means, ICD-9-CM codes E958.3, E958.4, E958.6-E958.9; ICD-10-CA codes X83, X84
- late effects of self-inflicted injury, ICD-9-CM code E959

Vaginal Birth After Caesarean Section Rate

The proportion of female residents ages 15 to 54 giving birth vaginally in 2007/2008 to 2011/2012 who had previously had at least one delivery by caesarean section. The denominator was female residents ages 15 to 54 delivering in the same time period who had at least one previous caesarean section delivery. A woman is determined to have experienced a delivery after C-section if each of the following criteria is met using hospital abstract data:

1. Presence of a uterine scar from previous surgery (ICD-9-CM diagnosis code of 654.2 or ICD-10 code of O34.201 or O75.701)
2. Any single ICD-9-CM or ICD-10 diagnoses code indicating a delivery

ICD-9-CM
V27.0, V27.2, V27.3, V27.5, or V27.6, in any position

ICD-10 -CA
O1, O2, O4, O6, O7, O8, O9, O30-O35, O37, O36.0, O36.1, O36.2, O36.3, O36.5, O36.6, O36.7, O36.8, O36.9 and with a sixth digit of '1' or '2'; Z37.0, Z37.2, Z37.3, Z37.5, or Z37.6, in any position

To obtain the numerator, all women who had caesarean section deliveries in the current fiscal year are removed from the denominator pool. Caesarean section deliveries are identified by ICD-9-CM procedure codes 74.0, 74.1, 74.2, 74.4, or 74.99 CCI procedure code 5.MD.60 in any position.

The percent is age-adjusted to the Manitoba female population ages 15 to 54.

Vital Statistics Database

Birth Database:

The central Vital Statistics Registry in each province and territory provides data from birth registrations to Statistics Canada. The following data items are reported for each birth by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- Date and place of birth
- Child's sex, birth weight and gestational age
- Parent's age, marital status and birthplace
- Mother's place of residence
- Type of birth (single or multiple)

Death Database:

The central Vital Statistics Registry in each province and territory provides data from death certificates to Statistics Canada. The following data items are reported for each death by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- Age, sex, marital status, place of residence and birth place of the deceased
- Date of death
- Underlying cause of death classified to the "World Health Organization International Classification of Disease and Related Health Problems" (ICD)
- Province or territory of occurrence of death
- Place of accident
- Autopsy information